

FFY06 Year-End Annual Report  
for the  
MassDEP/US EPA Region I  
Environmental Performance Partnership  
Agreement: 2005-2006

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## **Introduction**

This is the Massachusetts Department of Environmental Protection's Year-End Performance Partnership Agreement (PPA) Annual Report for Fiscal Year 2006. The Year-End Annual Report was developed for the MassDEP/United States EPA-Region I Environmental Performance Partnership Agreement for 2005-2006.

This document has four parts:

- Part 1: Trend Highlights – Part 1 is a brief narrative summary highlighting some noteworthy trend information for each of the goals outlined in the 2005-2006 MassDEP Program Plan/Environmental Performance Partnership Agreement (PPA).
- Part 2: Environmental and Programmatic Trend Data – Part 2 is a series of tables and other information (including some web links) that provides actual environmental and programmatic trend data for a variety of indicators. The narrative highlights in Part 1 were extrapolated from the trend data included in Part 2.
- Part 3: Environmental Strategies and Actions – Part 3 are tables summarizing progress made toward the environmental goals and in meeting the targets and key commitments contained in the FY06 PPA Workplan.
- Part 4: Inspection tables showing the number and type of inspections conducted in FY06.

For more information on MassDEP's activities, including MassDEP Program Plan/Environmental Performance Partnership Agreements (PPAs) and Year-End Annual PPA Reports for previous years, please see the MassDEP website at the following URL:

<http://www.mass.gov/dep/about/priorities/ppahome.htm>

For additional information on MassDEP priorities and results, see the MassDEP website at:

<http://mass.gov/dep/about/missionp.htm>

and the Massachusetts Executive Office of Energy and Environmental Affairs' State of the Environment Report 2006 at:

[http://www.mass.gov/envir/press/pressreleases/state\\_ofthe\\_envir2006.pdf](http://www.mass.gov/envir/press/pressreleases/state_ofthe_envir2006.pdf)

## **PART I: Highlights and Trends**

### **Goal 1: Clean Air**

#### ***Levels of National Ambient Air Quality Standards (NAAQS) Pollutants***

There are six principal air pollutants for which the federal government has established national ambient standards: lead (Pb), particulate matter (PM), carbon monoxide (CO), sulfur dioxide (SO<sub>2</sub>), nitrogen dioxide (NO<sub>2</sub>), and ozone. The entire state has been in attainment with the national ambient air quality standards for five of these six pollutants – Pb, PM, CO, SO<sub>2</sub>, and NO<sub>2</sub> -- for four years or more. Massachusetts stationary source permitting, compliance and enforcement programs, vehicle emission control programs, and controls on area sources (such as home heating fuel, consumer products, architectural coatings) have resulted in significant decreases in total emissions of these five air pollutants since the mid-1980s. CO, SO<sub>2</sub>, NO<sub>2</sub>, and Pb have all declined more than 60% in that time, and PM<sub>10</sub> by 22%. The state remains in non-attainment for ozone, yet there have been significant reductions in the number of exceedances of the one-hour from a high of 243 exceedances on 43 days in 1988, to 58 exceedances on 19 days in 2005. (2006 data will be available in the summer of 2007.)

Progress on Ozone levels has come about due to the implementation of many programs designed to control emissions of precursors to ozone including:

- Vehicle inspection and maintenance program for tailpipe emissions
- Requirements that automobiles meet California's more stringent tailpipe emission standard
- Transportation control programs designed to minimize vehicle miles traveled
- Implementation of stringent nitrogen dioxide controls on power plants and manufacturing facilities;
- Vapor recovery equipment at gasoline stations
- Reformulated gasoline
- Requirements on the composition of architectural coating
- Implementation of stringent controls on Volatile Organic Chemical (VOC) use and emissions by manufacturers.

These efforts have resulted in a 35% decline of VOC emissions between 1990 and 2002 and a 17% decline in NO<sub>x</sub> emissions over the same time period. (2002 is the most recent data, the next inventory will cover 2008 emissions, and be available in 2010). Because much of the ozone and ozone precursors are transported into Massachusetts from other states, attainment of the standard will be dependent upon further national and regional as well as state control programs. Detailed reports on Massachusetts' air quality can be found at

<http://www.mass.gov/dep/air/perfor01.htm>

#### ***Climate Change / Greenhouse Gas Controls***

Reducing greenhouse gas emissions is a priority for the Department of Environmental Protection (MassDEP) and the Commonwealth of Massachusetts. MassDEP is taking a number of steps to reduce greenhouse gas emissions and minimize climate change impacts:

- Reducing emissions from stationary sources through





implementation of 2nd in the nation greenhouse gas emissions standards for the state's highest emitting power plants, and incentives for emissions reductions by granting Greenhouse Gas Credits to qualifying projects that limit greenhouse gas emissions.

- Seeking Regional and National Solutions by working with other states across the country to develop a Greenhouse Gas Registry that will provide a common software platform and methodologies for recording and reporting greenhouse gas emissions information.
- Reducing emissions from transportation through the low-emission vehicle, transportation control, and rideshare programs, the Massachusetts Enhanced Emission & Safety Test, stepped-up enforcement of state vehicle idling restrictions, and efforts to promote transit-oriented development. Encouraging the development of renewable energy by streamlining regulations, accelerating permit reviews, and creating other incentives for projects that incorporate renewable energy, combined heat and power, or energy reliability.
- Supporting Smart Growth encouraging growth in already-developed areas and fostering transit-oriented development to reduce the frequency and distance of vehicle trips.

Additional information about MassDEP's Climate Change work can be found at:

<http://www.mass.gov/dep/air/climate/index.htm>

### ***Air Toxics***

MassDEP controls air toxic emissions through its vehicle and stationary source permitting, compliance and enforcement programs. In addition the states Toxics Use Reduction program creates incentives for reducing the use of toxics substances. The data from that program show that hazardous air pollutant emissions from the facilities subject to the Toxic Use Reduction Act have declined from 15.7 million tons per year in 1990 to 7.5 million tons in 2004.

(The most recent data (2005) data will be released in the summer of 2007. Additional information about air toxics in Massachusetts can be found at:

<http://www.mass.gov/dep/air/community/daqcpu01.htm> )

## **Goal 2: Clean Water – Highlights and Trends**

Over the 30 years since the enactment of the Clean Water and Safe Drinking Water Acts, government, citizens, and the private sector have worked together to make dramatic progress in improving the quality of surface waters and drinking water. Today, drinking water is treated to be safe at the faucet end and protected at the source. Furthermore, the number of polluted surface waters has been dramatically reduced, and many clean waters are even healthier. A massive investment of federal, state, and local funds has resulted in a new generation of sewage treatment facilities able to provide “secondary” treatment or better. More than 50 categories of industry are now subject to comply with nationally consistent discharge regulations. In addition, sustained efforts to implement “best management practices” have helped reduce runoff of pollutants from diffuse, or “non-point,” sources. But despite these outstanding improvements, population growth land development / use patterns and other factors continue to generate higher levels of water pollution and places greater demand on drinking-water systems. To further our progress toward clean surface and ground waters and safer drinking water, we must both maintain our commitment to the core measures we have already established and look for new ways to improve water quality and protect human health.

Trend information for Clean Water and Healthy Ecosystems may be found at <http://www.mass.gov/dep/water/priorities/sggwhome.htm> and information on Intact and Functioning Wetlands <http://www.mass.gov/dep/water/priorities/wethome.htm>.

Some major progress areas towards strategic priorities for Clean and Safe Water are highlighted below.

### ***Bacteria Total Maximum Daily Loads (TMDLs)***

Total Maximum Daily Loads (TMDLs) are extensive water quality plans that are required by federal rule to be developed for all surface waters that fail to meet national standards for human uses and for ecosystem health. A TMDL identifies the cause and potential sources of pollution that impair the water body, and the TMDL outlines actions that will restore water quality. In 2005, MassDEP and its consultants worked closely with EPA Region 1 to develop draft bacteria TMDLs in all 27 watersheds in the Commonwealth. The TMDLs, once approved, will address approximately 364 impaired waters throughout the Commonwealth. This project originated from the TMDL Innovations Workgroup of the New England states and EPA. MassDEP and EPA have worked closely together in both 2005 and 2006 in an effort to finalize these TMDLs. Unfortunately a number of issues arose as a result of input from local environmental groups and a court decision in Washington resulted in significant revisions and a great deal more work. In addition some legal questions have arisen and are being addressed at the present time. New versions have been created for two watersheds and it is hoped that these will serve as the basis of revisions to the remaining 25 watersheds over the next two years. This project will continue through FY07 and beyond. (for more information:

<http://www.mass.gov/dep/water/resources/tmdls.htm>)

### ***Assabet River Restoration***

The Assabet River, which runs through eastern-central Massachusetts, fails to meet national water quality standards. A primary cause of impairment is nutrient loading (phosphorous) coming from municipal wastewater treatment plants that discharge their treated wastewater into the Assabet. Last year, MassDEP made significant progress in reducing nutrient impacts to the

Assabet by jointly issuing National Pollutant Discharge Elimination System (NPDES) permits with phosphorus limits of 0.1 mg/l to the four treatment plants along the Assabet. These phosphorous limits are among the strictest in the country, and will greatly reduce the nutrient load on the river. A significant effort was put into working with the municipal permittees and the local watershed association to get them to withdraw the permit appeals they had filed, and these innovative and aggressive permits are now final. Additional work was undertaken through the Army Corps of Engineers to assess the potential to treat or remove phosphorus laden sediment within the impoundments or to possibly remove dams to aid water quality restoration efforts.

### ***Massachusetts Estuary Project (MEP)***

A significant contributor to the economy in Southeastern Massachusetts is the many beautiful beaches and ocean vistas. Many of the local embayments around Cape Cod, the Islands, and Buzzards Bay however have been directly impacted by increased nitrogen generated within their watersheds resulting in algal production, loss of eelgrass, and other water quality impacts. As a result the MassDEP and Umass Dartmouth-School of Marine Science and Technology (SMAST) combined efforts with many towns in that area to analyze water quality impacts and develop a model that will allow assessment of alternatives to restore water quality conditions and plan for future growth. During FY05 and FY06, the Massachusetts Estuary Project has developed detailed scientific reports, water quality models, and Total Maximum Daily Loads (pollution budgets) for 14 major embayment systems. This work will continue through FY07 with the ultimate goal of developing these tools for 89 Southeastern MA embayments over the next few years.

(For More information: <http://www.mass.gov/dep/water/resources/coastalr.htm>)

### ***Drinking Water Safety***

Drinking water in Massachusetts comes from both surface water (rivers and reservoirs) and groundwater (pumped from underground water sources). To protect human health, the state sets health based standards for contaminants in drinking water, usually based on federal/EPA rules. These standards specify the maximum allowable level of regulated contaminants. About 90 contaminants are now regulated in drinking water; new ones are being added regularly. We have 1,704 public water systems in Massachusetts, serving over 7 million people. Significant drinking water quality problems are rare and nearly all people on public water systems receive water that meets all health-based drinking water standards.

(For more information: <http://www.mass.gov/dep/water/priorities/dwhome.htm>)

### ***Safety of Delivered Drinking Water***

The percentage of public water systems that are fully complying with all of their monitoring and reporting obligations have been consistently improving for the last few years. However, the new Disinfection Byproduct Rule (DBPR) Stage 1 monitoring requirements at smaller systems, and monitoring performed in anticipation of the introduction of the forthcoming lower arsenic standard, have contributed to a slight reduction in monitoring and reporting compliance in 2005.

(For more information: <http://www.mass.gov/dep/water/priorities/metstn.htm>)

### **Goal 3: Preserve and Restore the Land – Highlights and Trends**

#### ***Solid Waste Diversion***

MassDEP has set an aggressive solid waste reduction goal: the diversion of 70% of the solid waste generated in the state through a combination of source reduction, recycling, and reuse. The state has worked to meet this goal through a combination of grant and technical assistance programs for municipalities and businesses, as well as bans on the disposal of certain types of wastes, and is making progress. In 2000 the state diverted approximately 50% of the solid waste generated. In 2004 that number had risen to 60%, despite an 8% increase in the total amount of solid waste generated over the four years, and a decline in funds available for grants. In 2003, MassDEP was authorized to distribute \$3.66 million in grant funds versus \$2.0 million in 2005, and \$2.5 million in 2006. Please note that despite these gains in solid waste diversion, the total amount of solid waste disposed has continued to increase. More information about Solid Waste diversion can be found at: <http://www.mass.gov/dep/recycle/index.htm>

#### ***Mercury Emission Reductions***

Massachusetts has taken many steps to reduce mercury emissions including the strictest solid waste incinerator emission limits in the nation, a requirement that coal fired power plants reduce mercury emissions by 85%, a major campaign to recycle rather than dispose of mercury-containing products (such as thermostats, thermometers, and fluorescent bulbs), a program to collect and recycle mercury from dental fillings, and the passage of the Massachusetts Mercury Management Act in 2006, which requires end of life recycling for all mercury containing products, and bans the sale and purchase by state and local governments of certain mercury containing products.

These programs are having an effect: In 2004, the average mercury levels in fish sampled from lakes downwind of our incinerators had dropped 24-32% since the emission reduction programs went into effect starting in the 1990's. Mercury levels have also dropped in fish from other lakes across the Commonwealth, but less dramatically. In addition, the large wastewater treatment authority that serves the greater Boston area (the Massachusetts Water Resource Authority) has seen a drop in mercury concentrations in its sewage sludge from a high of 4.4 mg/kg (dry weight basis) in May 2004 to below 3.0 in 2006 since the implementation of an innovative MassDEP program requiring recycling of dental mercury. Additional information about mercury in Massachusetts and the programs to control it can be found at: <http://www.mass.gov/dep/toxics/stypes/hgres.htm>.

#### ***Proper Management of Solid and Hazardous Waste***

##### **Hazardous Waste Site Cleanups**

Since 1994, under MassDEP's privatized waste site clean up program, more than 26,000 sites have been cleaned up. Ninety-eight percent (98%) of the sites closed have achieved a permanent solution, and ninety-three percent (93%) of the sites are clean enough to be acceptable for unrestricted use (no institutional control, or "Activity and Use Limitation"). Since FY03, the number of sites closed out each year has exceeded the number of new notifications, indicating a steady decline in the number of "active" (open) sites.

In FY06, the number of sites at which MassDEP took response/clean up actions using public



funds because Potentially Responsible Parties (PRPs) were unable and unwilling to take timely action increased significantly (FY05 88 sites/FY06 111 sites), as did the amount spent on those actions (FY05 \$6,756,839/FY06 \$10,474,900). Also in FY06, the number of sites closed and the number of Response Action Outcomes submitted increased when compared to FY05, while the average time to complete cleanups decreased.

In FY06, Potentially Responsible Parties achieved a compliance rate of 92% for Immediate Response Action (IRA) submittal requirements, measured one year after discovery of the condition requiring the IRA. This compliance rate is evidence that risk reduction at waste sites is being maximized by the implementation of mandatory risk reduction measures.

Finally, the MassDEP Emergency Response Program handled approximately 3,000 incidents in FY06, including 933 two-hour notifications (sudden releases, spills). ER staff also participated in EPA Level A Drills; Spill Prevention, Control and Countermeasure Inspections; and Government-Initiated Unannounced Exercises.

### **The Quality of Privatized Cleanups**

In FY06, MassDEP dramatically increased its efforts to ensure that privatized cleanups are conducted in compliance with state regulatory requirements. As compared to FY05, BWSC initiated more overall enforcement actions (FY05 1,131/FY06 1,399), conducted more audits (FY05 2,939/FY06 3,049), increased the number of higher-level enforcement actions (FY05 222/FY06 261), and increased the number of compliance inspections (FY05 1,286/FY06 1,548). In addition, in FY06, BWSC published 8 audit and enforcement related articles in the trade newsletter of the LSP Association.

In FY06, BWSC also invested significant resources training Licensed Site Professionals and other environmental professionals, providing 14 classes reaching a total of 1,050 professionals.

### **NPL Sites/Federal Facilities**

MassDEP is directly involved in approximately 30 NPL Sites/Federal Facilities in various stages of cleanup. Activities include overseeing Remedial Investigations, Feasibility Studies and Remedial Actions; implementing Operation and Maintenance activities; reviewing and commenting on technical reports; and participating in settlement negotiations. During FY05 and FY06, MassDEP reviewed and concurred on 6 Records of Decision, finalized 1 State Superfund Contract, performed Remedy oversight at 8 sites, and implemented Operations and Maintenance activities at 5 sites.

### **Brownfields**

MassDEP continues to provide significant technical outreach to brownfields project proponents through the Boston and regional offices, as well as through its website and various presentations. During FY06, MassDEP provided technical assistance to more than 100 brownfields project proponents and marketed 18 cost recovery/lien sites for redevelopment.

MassDEP was also highly involved in planning for the Brownfields2006 Conference held in



Boston, including chairing the Marketing Committee, and serving on the Executive Planning Committee. MassDEP prepared a 30-minute video for the conference featuring successfully redeveloped brownfields sites that used state and federal incentive programs. MassDEP also prepared informational brochures for distribution at the conference. These materials will be used as educational/informational tools at future forums.

The Massachusetts/Rhode Island Chapter of the National Brownfields Association (NBA) continues to increase its membership base, and MassDEP staff serves on the Executive Committee, and chairs the Technical/Training Committee and Communications Committee.

## **Goal 4: Healthy Communities and Ecosystems – Highlights and Trends**

### ***Identifying and Preventing Wetland Loss***

MassDEP has continued efforts to generate and analyze aerial photos of the entire state to evaluate wetlands loss over time, and to identify the causes of that loss. New flights and photography were conducted in April of 2005 to identify wetland loss that occurred between 2001 and 2005. Imagery was analyzed throughout 2006 and MassDEP analysis has found 1473 sites with a total of 482 acres of wetland loss across the state. In the previous wetland loss analysis conducted covering about 70% of the state for the period between 1990 and 2001, we found 3248 sites with a total of 850 acres of wetland loss. Although the previous wetland loss analysis was based on data flown at different times over a period of 11 years, it appears that wetland loss rates have remained stable or decreased slightly. Further, we have found that of the known reasons for the wetland loss statewide, residential and commercial development have been the largest causes of the loss (19% and 12% respectively), with the heaviest growth concentrated in the southeast region of the state. MassDEP's goal is to obtain new data about every 2-3 years so we can keep a current tally on wetlands loss in the state.

In the first wetland loss analysis, MassDEP staff conducted a labor intensive file review of a sample 92 towns to better determine what the principal causes are and how we can most effectively intervene to better protect wetlands. The most significant finding was that a very large portion of the wetlands filling was unpermitted. A significant effort is currently underway to integrate assorted wetland databases and GIS mapping information to develop a link between permits issued and wetland losses identified on our maps. This will increase MassDEP's ability to quickly distinguish wetlands filling that is unpermitted from those activities that are permitted. MassDEP is also undertaking a comprehensive enforcement effort to find and penalize those responsible for illegal wetlands filling. Substantial efforts continue to be made to publicize this enforcement initiative (including the assessment of heavy penalties and requirements for restoration) in order to serve as a deterrent for others. The wetlands loss maps have been made available to communities and the public so that a variety of stakeholders can work together toward prevention of unpermitted fill.

(For more information: <http://www.mass.gov/dep/water/priorities/idwet.htm>, and <http://www.mass.gov/dep/water/priorities/upwet.htm>)

## **PART II: Environmental & Programmatic Trend Information** **(FY2006)**

### **Goal 1: Clean Air**

#### **AIR ENVIRONMENTAL INDICATORS< OUTCOMES AND OUTPUT CHARTS**

*Note: These charts summarize the most recent information available as of May 2007. Updated information on air quality will be available in the summer of 2007. The next emissions inventory will not be completed until 2010. The full air quality reports can be found at: <http://www.mass.gov/dep/air/perfor01.htm> . The full emissions inventory reports can be found at <http://www.mass.gov/dep/air/priorities/daqcpu06.htm#inventories>*

Environmental Indicators	BASELINE		CY 2004 (Status and Change from Baseline)	CY 2005 Status and Change from CY 2004)
<b>Attainment status for air pollutants with National Ambient Air Quality Standard (NAAQS) (including Redesignation of areas attaining the current NAAQS, revocations of the 1hour ozone NAAQS for areas attaining it, and designations of areas for the 8-hour ozone and PM-2.5 NAAQS*</b>	<b>Yr stand ard set</b>	<b>Status</b>		
CO	<b>1970</b>	Last violation in 1986 Entire state in attainment as of 2002		
PM10 (Particulate Matter with a diameter <= 10 microns)  Superceded standard for Total Suspended Particulates (TSP) set in 1970	<b>1987</b>	Entire state in attainment as from start of monitoring		
NOX	<b>1970</b>	Entire state in attainment prior to 1985		
8 hr Ozone	<b>1997</b>	Entire state non attainment	MA recommended state-wide non-attainment status under the 8-hour ozone standard in July 2003, status finalized in April 2004	Entire state designated moderate non-attainment for 8-hour ozone in April 04 and

Environmental Indicators	BASELINE		CY 2004 (Status and Change from Baseline)	CY 2005 (Status and Change from CY 2004)
1 hr Ozone	1970	Entire state non attainment Standard eliminated in favor of 8 Hour Standard on June, 15 2005		1-hour Standard revoked 6/15/05 – 1 yr after effectiveness designations under 8 Hour Standard.
S02	1970	Entire state in attainment prior to 1985		
PM2.5	1997	Entire state in attainment as of: 2004		Entire state designated attainment for PM 2.5 in Dec. 2004.
Lead	1980	Entire state in attainment prior to 1985	↑↑	
Trends in ambient concentrations of the “Criteria Pollutants” for which there are National Ambient Air Quality Standards from the air monitoring networks*			From CY 2003 – CY2004 (averaged across all monitors available for each pollutant)	From CY 2004 –CY 2005 (averaged across all monitors available for each pollutant)
CO Standard: 2 <sup>nd</sup> Maximum 8 hour value = 9 ppm	1985 Boston: 6.1 ppm (monitor w/highest reading) Lowell 8.0 ppm		Boston: ↓ 2.0 ppm (monitor w/highest reading) Lowell: ↓ 1.8 ppm	Boston: ↑ 2.3 ppm (monitor w/highest reading) Lowell: ↔ 1.8 ppm
PM10: Standard: 50 µg/m <sup>3</sup> (Annual Arithmetic Mean)	1985 Boston: 32 µg/m <sup>3</sup> Springfield 30 µg/m <sup>3</sup> Ware: 15 µg/m <sup>3</sup>		↓ 20. µg/m <sup>3</sup>	↑ 21.69. µg/m <sup>3</sup>
NO <sub>2</sub> Standard: 0.05 ppm (Annual Arithmetic Mean)	1985 Boston: 0.03 µg/m <sup>3</sup> Springfield: 0.02 µg/m <sup>3</sup> 1996 Other areas: 0.015		Boston: ↓ 0.02 µg/m <sup>3</sup> Springfield ↔ 0.02 µg/m <sup>3</sup> Other areas: ↓ 0.010 µg/m <sup>3</sup>	Boston: ↓ 016 ug/m3 Springfield: ↓ 017 ug/m3 Other areas: ↓ 007 ug/m3
8 hr Ozone Standard: 0.085 ppm	1988 The standard was exceeded a total of 243 times on a total of 43 days		↓ The standard was exceeded a total of 19 times on a total of 8 days	↑ The standard was exceeded a total of 58 times on a total of 19 days

\* ECOS Core Performance Measure

Environmental Indicators	BASELINE				CY 2004 (Status and Change from Baseline)			CY 2005 Status and Change from CY 2004)		
1 hr Ozone Standard: 0.125 ppm	<b>1988</b> The standard was exceeded a total of 101 times during the year. These exceedances occurred on 30 different days.				↓ The standard was exceeded once on one day			↑ The standard was exceeded five times on three days.  (The 1-hr standard was discontinued June 15, 2005)		
SO <sub>2</sub> Standard: Annual Arithmetic Mean = 0.03 ppm	<b>1985</b> 0.012 ppm				↓ SO <sub>2</sub> average annual levels have declined from 012 ppm to .004 ppm			↔ SO <sub>2</sub> levels have remained stable at .004 ppm		
PM <sub>2.5</sub>	<b>2003</b> The PM <sub>2.5</sub> concentrations averaged 11.1 ug/m <sup>3</sup> statewide during 2003. The 98 <sup>th</sup> percentile value was 36 ug/m <sup>3</sup> . All monitors measured levels below the standard for both the annual and daily standard.				↔ PM <sub>2.5</sub> has remained stable with an annual average over all sites (11.1 to 11.2 ug/m <sup>3</sup> ), although the 98 <sup>th</sup> percentiles have declined from 36 to 30 ug/m <sup>3</sup> . All monitors measured levels below the standard for both the annual and daily standard. As mentioned in the text, data capture improved between 2003 and 2004.			↔ PM <sub>2.5</sub> has remained stable with an annual average over all sites (11.1 to 11.4 ug/m <sup>3</sup> ), although the 98 <sup>th</sup> percentiles have remained stable at 30 ug/m <sup>3</sup> . All monitors are measuring levels below the standard for both the annual and daily standard.		
Lead Standard: Annual arithmetic mean = 1.5 ug/m <sup>3</sup>	1986 .16 ug/m <sup>3</sup>				↓ Lead levels have declined to 0.02 ug/m <sup>3</sup> (Pb values have been stable since the early 90s)			↓ Lead levels have declined to 0.013 ug/m <sup>3</sup> (Pb values have been stable since the early 90s)		
Air toxics ambient data from the state's special ozone monitoring network and special monitoring studies	<b>BASELINE</b> Roxbury: 2001 Chicopee: 2001 *Long Island: 2001 *Lynn: 2002 * "background sites"  mean values (ppb) Rox Bury    Chico pee    Long Island    Lynn				2004 mean values (ppb) Roxbury    Long Island    Lynn			2005 mean values (ppb) Roxbury    Lynn		
1,3-butadiene	0.06		0.02	0.02	0.04 ↓		0.00 ↓	0.06 ↑		0.02 ↑
1,1,1-trichloroethane	0.06		0.03	0.03	0.02 ↑		0.02 ↓	0.02 ↔		0.02 ↔
Trichloroethylene	0.02		0.01	0.004	0.02 ↔		0.02 ↑	0.02 ↔		0.02 ↔
tetrachloroethylene	0.05		0.03	0.03	0.50 ↑		0.04 ↑	0.03 ↓		0.03 ↓
Benzene	0.37	0.25	0.19	0.19	0.28 ↓	.21 ↓	0.15 ↓	0.39 ↑		0.22 ↑
Toluene	0.84	0.50	0.34	0.33	0.76 ↓	.41 ↑	0.47 ↑	1.23 ↑		0.65 ↑
Xylenes	0.16	0.30	0.06	0.09	0.42 ↑	.11 ↓	0.19 ↑	0.32 ↓		0.08 ↓
Ethylbenzene	0.15	0.10	0.06	0.05	0.10 ↓	.06 ↓	0.06 ↑	0.16 ↑		0.05 ↓

Environmental Indicators	BASELINE	CY 2004 (Status and Change from Baseline)	CY 2005 Status and Change from CY 2004)
State progress in collecting and compiling ambient and emission source data for toxics to better characterize the nature and extent of toxic air pollution	<p><b>In 2003</b> A PM 10 sampler was installed at the Roxbury toxic site that will begin sampling for toxic metals in 2004.</p> <p>A GC was installed at the Ware PAMS site to allow hourly VOC data to be collected.</p> <p>An aethelometer was installed at the North End site. Carbonyl sampling at Chicopee was suspended due to staffing shortages (resumed in 2003).</p>	<p><b>In 2004</b> The toxics VOC data, taken from samples collected at Roxbury, Long Island and Lynn over the last several years has been formatted and submitted to AIRS.</p> <p>Chromium +6 sampling began at Roxbury in January, 2005.</p> <p>The National Air Toxics Trends Site in Roxbury received a new shelter in October, 2004.</p> <p>The PAMs sampling equipment, previously located at Truro and Fairhaven, was moved to Long Island and operated during the 2004 PAMs season.</p>	<p><b>In 2005:</b> There were no major changes in Toxics or PAMS in 2005, other than the start of the replacement of aging equipment at the PAMS sites.</p> <p>The average Chromium+6 concentration detected at Roxbury in 2005 was 0.036 nanograms per cubic meter and the maximum one day value was 0.18 nanograms per cubic meter.</p>

Outcomes	BASELINE:		CY 2002 (most recent data)		
Emissions reductions since 1990 for each criteria pollutant* (Based on most recent inventory data: 2002)	1990: EMISSIONS:		Emission change from 1990-2004:		
	VOC:	1,070 Tons	VOC:	↓ 35%%	
	NOx:-	925 Tons	NOx:	↓ 17 %	
	SO2:-	6,493 Tons	SO2:	↓ 56%	
	CO:	1,007 Tons	CO:	↓ 35%	
Share of emissions of VOC (Based on most recent inventory data: 2002)	1990				
	Point Sources	6%	Point Sources	2%	
	Area Sources	34%	Area Sources	44%	
	On Road Mobile Sources	33%	On Road Mobile Sources	22%	
	Off-Road Mobile Sources	26%	Off-Road Mobile Sources	32%	
Share of emissions of, NOX (Based on most recent inventory data: 2002)	1990				
	Point Sources	34%	Point Sources	13%	
	Area Sources	4%	Area Sources	4%	
	On Road Mobile Sources	49%	On Road Mobile Sources	47%	
	Off-Road Mobile Sources	13%	Off-Road Mobile Sources	15%	

Outputs	CY 2004	CY 2005	CY 2006
# of gas stations and automotive dealers trained and certified in the	➤ 1,660 stations tested vehicles (1,552 public stations and 108	➤ 1,655 stations tested vehicles (1,548 public stations and 107	➤ 1,683 stations tested vehicles (1,566 public stations and 117

\* ECOS Core Performance Measure

MassDEP/US EPA Region I Environmental Performance Partnership Agreement: FFY06 Year-End Annual Report

Outputs	CY 2004	CY 2005	CY 2006
<b>Enhanced Inspection and Maintenance Program</b>	fleet-only stations) <ul style="list-style-type: none"> <li>➤ 5,950 Inspectors conducted inspections</li> <li>➤ Over 950 Registered Repairers trained in emission repairs were associated with over 625 Registered Repair Facilities</li> </ul>	fleet-only stations) <ul style="list-style-type: none"> <li>➤ 5,871 Inspectors conducted inspections</li> <li>➤ Over 950 Registered Repairers trained in emission repairs were associated with over 650 Registered Repair Facilities</li> </ul>	fleet-only stations) <ul style="list-style-type: none"> <li>➤ 5999 Inspectors conducted inspections</li> <li>➤ Over 950 Registered Repairers trained in emission repairs were associated with over 650 Registered Repair Facilities</li> </ul>
<b># and % of gas stations that self certified in the Stage II Vapor Recovery Program and % of gasoline dispensed through certified systems</b>	FFY04 # Certifications received: 2657 % of gas stations certifying: 91% % of gas dispensed through certified systems: 93%	FFY05 # Certifications received: 2984 % of gas stations certifying: 98% % of gas dispensed through certified systems: 98%	FFY06 # Certifications received: 3017 % of gas stations certifying: 99% % of gas dispensed through certified systems: 99%
<b># of companies with 1,000+ employees which have submitted Rideshare Reports</b>	113 Reports for FFY 04	184 reports received in FFY 05	202 reports received in FFY06

### AMBIENT AIR QUALITY AND EMISSIONS

Despite increases in activities that contribute to air pollution such as fuel use, economic activity, and vehicle miles traveled, Massachusetts' air quality has improved significantly over the 18-year period from 1985 to 2003. Massachusetts' air quality complies with the National Ambient Air Quality Standards (NAAQS) for Carbon Monoxide (CO), Sulfur Dioxide (SO<sub>2</sub>), Lead (Pb), Particulate Matter –10 (PM<sub>10</sub>), Nitrogen Dioxide (NO<sub>2</sub>).

All PM 2.5 monitors in the state are measuring levels below the PM 2.5 standards. Ozone is the only NAAQS that MA is violating.

#### Ambient Air Quality

##### NAAQS Pollutants

DEP's air quality monitoring network for criteria pollutants has measured the following changes:

- **CO** concentrations have declined by 70% from 1985 to 2005
- **SO<sub>2</sub>** concentrations have declined by 64% from 1986 to 2005
- **NO<sub>2</sub>** concentrations have declined by 62% from 1985 to 2005
- **Pb** concentrations have declined by 87% from 1987 to 2005
- **PM<sub>10</sub>** concentrations have declined by 22% from 1989 to 2005

The trends for SO<sub>2</sub>, CO, NO<sub>2</sub>, Pb, and PM<sub>10</sub> have been relatively stable over the last six years, at levels below the applicable standards.

The number and magnitude of exceedances of the 1-hour ozone standard declined significantly from the 1980s and 2005 when the standard was discontinued. . Exceedances of the 1-hour Ozone (O<sub>3</sub>) standard have declined from as many as 109 exceedances per ozone season from 1987 – 1995 down to 10 or less per ozone season since 1995, with the exception of 2002 when there were 22 exceedances. The number of *days* when the 1-hour standard was exceeded dropped from around 10 per ozone season during the late 1980s and 1990s to 7 or fewer days per ozone season in the most recent 3 years.

The improvements in the 1-hour ambient ozone levels have coincided with the implementation in-state and throughout the Ozone Transport Region (the "northeast corridor") of major state and federal programs designed to reduce ozone precursor emissions from industries, power plants, vehicles, and consumer products that contribute to ambient air pollution.

Additional reductions in precursor emissions, especially from upwind sources, will be needed if Massachusetts is to attain the 8-hour ozone standard that was adopted in 1997. The number of days that the more stringent 8-hour O<sub>3</sub> standard has been exceeded, however, has been fairly stable over roughly the same time period (typically in the 20-30 day range). However, the total number of measured 8-hour

exceedances at all monitors (as opposed to days on which the standard was exceeded at one or more monitors) has displayed less stability, ranging from a high of 264 in 1988 to a low of 15 in 2000. The average number of measured 8-hour exceedances per year has been 83 over the period 1985 to 2003. In 2005 there were 58 exceedances on 19 days.

Ozone, in particular, can exhibit striking year-to-year variations since meteorological fluctuations significantly influence the chemical processes that produce ozone as well as the quality of the air masses entering Massachusetts.

PM<sub>2.5</sub> average annual means have generally declined since monitoring started in 1999 (the average annual mean for sites existing in 2005 is down from 12.7 ug/m<sup>3</sup> in 1999 to 11.3 in 2005). However, average peak values represented by the 98<sup>th</sup> percentile have fluctuated between 30 and 40 ug/m<sup>3</sup> over the same period with no clear trend (for sites existing in 2005). More data will be needed to determine whether these constitute a longer term trend.

### **Emissions Reductions Trends Analysis**

Emissions inventories are updated periodically per EPA requirements. DEP is currently finalizing a 2002 emissions inventory. (The next update is projected for publication in 2010.) Preliminary 2002 data was submitted to EPA in June 2004 and will be issued for public comment in Fall 2007 with the State Implementation Plan revisions. Emission trends are shown from 1990 through 2002, based on the preliminary 2002 inventory data. The trends illustrate success in moving toward the goal of ensuring that citizens have clean air to breathe, and corroborate the gains seen in ambient air quality. Programs that are being implemented subsequent to 2002 such as low sulfur fuel and California Low Emission Vehicle Standards will ensure continued downward trends in emissions of motor vehicle-related criteria pollutants and their precursors, and should lead to continued progress toward reducing 8-hour ozone concentrations, and continued attainment of the standards for the other pollutants. Attainment of the 8-hour standard will be dependent on further national, regional and state emission reduction programs.

#### VOC Emissions Trend: 1990 to 2002: - 35 %

The 1990 to 2002 VOC reductions are the result of controls that DEP implemented to meet provisions of the federal Clean Air Act (CAA) Amendments of 1990 for geographical areas not meeting the health-based ozone ambient standards. These control measures include: Basic automobile control Inspection and Maintenance (I/M) and, since 1999, Enhanced I/M, Federal Motor Vehicle Control Program, California LEV since 1995, Reasonable Available Control Technology (RACT) requirements for point sources, Stage II Vapor Recovery for Gasoline Stations, Architectural Coatings (i.e., lower paint emissions), and Reformulated Gasoline. On-road mobile VOC emissions were reduced by 57% during this period, despite a continued increase in vehicle miles traveled.

#### NOx Emissions Trend: 1990 to 2002: - 17%

The 1990-2002 NOx reductions are based on controls that DEP implemented to meet the NOx provisions of the federal Clean Air Act (CAA) Amendments of 1990 for geographical areas not meeting the health-based ozone ambient standards. Emission reductions from 1990 to 2002 were derived from control measures such as: Basic and Enhanced I/M, Federal Motor Vehicle Control Program, California LEV and Reasonable Available Control Technology (RACT) on combustion units on point sources (industries, utilities). These reductions were achieved despite overall economic growth during this time period. Point source NOx emissions, primarily power plants, were reduced by 59% for this period. Area source emissions decreased by 10%. On-road mobile emissions were unchanged at the end of this period while off-road mobile emissions increased by 18%. Off-road NOx mobile emissions are expected to decrease in future years as new control programs are implemented.

#### SO<sub>2</sub> Emission Trends: 1990 to 2002: - 56 %

SO<sub>2</sub> emissions are tracked annually as part of the requirements of the 1985 State Acid Rain (STAR) program. Nearly all SO<sub>2</sub> emissions are from large point sources, especially power plants. The STAR program established a 412,000-ton state cap, which is more stringent than the federal acid rain program. The SO<sub>2</sub> emission estimate for 2002 is 161,500 tons, which is significantly lower than the cap. Reductions are the result of emission controls.



CO Emission Trends: 1990 to 2002: - 35%

There was a 54% reduction in on-road mobile emissions during this period as a result of the on-road mobile source programs described above under VOC and NOx trends. This decrease in mobile emissions was partially offset by a 17% increase in off-road CO emissions. There was a 17% decrease during this period in point source CO emissions.

## **Goal 2: Clean and Safe Water**

### **Massachusetts 2005-2006 PPA Water Program**

In the 2005-2006 Performance Partnership Agreement (PPA) DEP piloted an innovative approach to the development of environmental goals and the work plans needed to achieve those goals and disseminated them via the Internet. Consistent with this approach, trend information for Clean Water and Healthy Ecosystems may be found at <http://www.mass.gov/dep/water/priorities/sggwhome.htm> and information on Intact and Functioning Wetlands <http://www.mass.gov/dep/water/priorities/wethome.htm>. The progress towards strategic priorities for Clean and Safe Water is outlined below.

The following is a summary of progress on strategic priorities identified in the Performance Partnership Agreement during 2004, 2005 and 2006.

### **Restoring Impaired Waters**

- Pursue innovative approaches to TMDL-development and to addressing water quality impairments through the Assabet River and Massachusetts Estuaries projects described in detail below

#### **Assabet River**

**Update:** During FY 2004 the Assabet River TMDL was completed and approved by EPA. Also in FY04 draft permits were developed and issued. In FY2005 permits were finalized and additional funding provided to evaluate the potential of sediment and/or dam removal in the Assabet River impoundments. Also in 2005 a memorandum of understanding was developed between MassDEP and the Assabet River Consortium to finalize a structure for participation, funding, and decision-making for the dam and sediment feasibility study. State funds were encumbered and a contract was awarded to the Army Corps of Engineers to conduct this work in 2005. In 2006 a study coordination team with representatives from each of the Towns, MassDEP, EPA, the Organization for the Assabet River, the Riverways Program and the Army Corps of Engineers developed and began implementing a scope of work. This work will continue through FY07. A more detailed summary of FY2004-2005 and FY2005-2006 outputs for the Assabet River project are provided below.

#### **FFY 2004-2005 Outputs:**

- Development of draft and final TMDL for nutrients  
**Update: completed and approved**
- Hold public meetings  
**Update: completed**
- Respond to comments and finalize TMDL for submittal to EPA for approval  
**Update: completed**
- Develop Draft and Final NPDES permits with EPA  
**Update: draft completed in FFY04; final pending**
- Hold Public hearings if necessary in 2004 and finalize permits  
**Update: completed**
- Work with the Army Corps of Engineers and Assabet River stakeholders to develop scope of work for sediment/dam removal feasibility study  
**Update: agreement w/ACOE completed, partial funding transferred; preliminary scope of work**

**developed with stakeholders**

- Finalize initial work with USGS on sediment quality data collection and interpretation  
**Update: field work completed, awaiting final report**
- Begin development of a monitoring plan to implement and assess progress as the phased approach is implemented.  
**Update: initial draft developed and under internal review**

**FFY 2005-2006 Outputs:**

- Finalize Assabet NPDES permits:  
**Update: Public Meetings held, permits have been completed and issued.**
- Work with the Army Corps of Engineers and Assabet River stakeholders to develop scope of work for sediment/dam removal feasibility study
- **Update: Funding has been provided and project underway. Discussions are underway with the dam owners and the Towns and modeling has been started in determine the impacts related to sediment transport and water quality from possible dam removal options. This effort will continue through 2007.**
- Begin development of a monitoring plan to implement and assess progress as the phased approach is implemented.

*Update: MassDEP plan has been developed and reviewed by stakeholders. In the summer of 2006 and intensive water quality survey was conducted by MassDEP. In addition, the Organization for the Assabet River has begun collection of biomass data. Finally, a contract has been awarded to the USGS to develop and implement a plan for data collection between 2006 and 2009. A draft plan has been developed is undergoing discussion.*

**Massachusetts Estuaries Project**

**Update:** During FY04 draft and final technical reports and TMDLs were developed by SMAST and MassDEP for the Town of Chatham (addressing 5 estuaries). After a public meeting the TMDL was submitted to and approved by EPA. In addition, Bacteria TMDLs were finalized for Frost Fish Creek and Muddy Creek in Chatham and were also approved by EPA. Finally technical reports and draft TMDLs were also developed for Popponessett Bay and Quashnet River during the first quarter of FFY05 but have not yet been approved. During FY05 and FY06, the MEP has developed detailed scientific reports, water quality models, and total maximum daily loads for 14 major embayments systems. A number of additional evaluations are also underway including monitoring in virtually all 89 embayments. This work will continue through FY07 with the ultimate goal of developing these tools for 89 Southeastern MA embayments over the next few years. A more detailed summary of FY2004-2005 and FY2005-2006 outputs for the Massachusetts Estuaries Project are provided below including tables outlining the status of activities for carry-over projects from FY05 and new projects being developed in FY06.

**FFY2004-2005 Outputs:**

- Conduct on-going data gathering and modeling activities during 2004-05, including:
  - Complete draft technical reports for 15 embayments in FFY04, including the five already completed Chatham reports  
**Update: as of 10/04, 9 were completed including Chatham (5), Popponessett (1), and Quashnet (3)**
  - Complete final technical reports for 11 embayments in FFY04, including the five Chatham reports  
**Update: as of 10/04, completed 6 Final tech reports including Chatham(5) and Popponessett (1)**
  - Complete draft technical reports on 7 additional embayments in FFY05  
**Update: additional draft tech reports completed in FFY05 include Great Pond, Green Pond, Bournes Pond; work under way on Oyster Pond, Three Bays, Wareham River, West Falmouth Harbor, New Bedford Inner Harbor, and Pleasant Bay (3).**

- Complete final technical reports on 9 additional embayments in FFY05

**Update: current schedule calls for finalizing Quashnet (3), Great Pond, Green Pond, Bournes Pond, Little Pond, Oyster Pond, Three Bays, Wareham River, and West Falmouth Harbor**

- Prepare TMDL's for 7 embayments in FFY 2004, and 10 embayments in FFY05  
**Update: 8 draft TMDLs prepared in FFY04 including Chatham (5), Quashnet (3), Popponessett Bay (1), Frost Fish Creek bacteria (1), Muddy Creek bacteria (1)**
- Initiate data gathering and modeling in 12 new embayments in FFY04, and in 11 embayments in FFY05

**Update: data gathering under way in 49 embayments; modeling under way in most waters identified above where draft technical report development is underway for FFY05.**

- Continue pre-technical assessment nutrient monitoring in an additional 64 embayments through FY04-05 in anticipation of doing modeling and preparing technical reports and TMDL's in those basins in future years.

**Update: data gathering under way in 49 embayments**

#### **FFY 2005-2006 Outputs:**

Conduct on-going data gathering and modeling activities during 2005-06

-Carryover Projects from FY05

<b>Project</b>	<b>Draft Tech Report</b>	<b>Final Tech Report</b>	<b>Draft TMDL</b>	<b>Final TMDL</b>
1. Oyster Pond, Falmouth (B)	Completed	Completed	Not Required <sup>2</sup>	Not Required <sup>2</sup>
2. Three Bays/Princes Cove (B)	Completed	Completed	Not Required <sup>2</sup>	Not Required <sup>2</sup>
3. Nantucket Harbor, (B)	Completed	Completed	Not Required <sup>2</sup>	Not Required <sup>2</sup>
4. Sesachacha Pond, Nantucket (B)	Completed	Completed	Not Required <sup>2</sup>	Not Required <sup>2</sup>
5. Great Pond, Falmouth (N)	Completed	Completed	Completed	Completed
6. Green Pond, Falmouth (N)	Completed	Completed	Completed	Completed
7. Bourne Pond, Falmouth (N)	Completed	Completed	Completed	Completed
8. Quashnet River, Mashpee (N)	Completed	Completed	Completed	Completed

**Additional MEP Projects Scheduled for FY06**

<b>Project</b>	<b>Draft Tech Report</b>	<b>Final Tech Report</b>	<b>Draft TMDL</b>	<b>Final TMDL</b>
1. Oyster Pond (N)	Completed	Completed	Completed	Awaiting Public meeting
2. Little Pond (N)	Completed	Completed	Completed	Awaiting Public meeting
3. Three Bays/Princes Cove (N)	Completed	Completed	Completed	Awaiting Public meeting
4. Wareham (N)	Anticipated Q3- 2007 <sup>1</sup>	Anticipated Q4- 2007 <sup>1</sup>	Anticipated Q4- 2007 <sup>1</sup>	Anticipated Q2 - 2008 <sup>1</sup>
5. West Falmouth Harbor (N)	Completed	Completed	Completed	Awaiting Public meeting
6. Achusnet River/New Bedford (N)	Anticipated Q3- 2007 <sup>1</sup>	Anticipated Q4- 2007 <sup>1</sup>	Anticipated Q4- 2007 <sup>1</sup>	Anticipated Q2 - 2008 <sup>1</sup>
7. Sessachacha Pond, Nantucket (N)	Completed	Completed	Under Development	Awaiting Public meeting
8. Pleasant Bay (N)	Completed	Completed	Completed	Public meeting held Final TMDL under development
9. Aucoot Cove (N)	Awaiting additional data collection	Awaiting additional data collection	Awaiting additional data collection	Awaiting additional data collection
10. Back River/Eel Pond (N)	Completed	Completed	Completed	Awaiting Public meeting
11. Nantucket Harbor (N)	Completed	Completed	Under Development	Awaiting Public meeting
12. Edgartown Great Pond (N)	Awaiting additional data collection	Awaiting additional data collection	Awaiting additional data collection	Awaiting additional data collection
13. Little Namasket River (N)	Anticipated Q3- 2007 <sup>1</sup>	Anticipated Q4- 2007 <sup>1</sup>	Anticipated Q4- 2007 <sup>1</sup>	Anticipated Q2 - 2008 <sup>1</sup>
14. Namasket River (N)	Anticipated Q3- 2007 <sup>1</sup>	Anticipated Q4- 2007 <sup>1</sup>	Anticipated Q4- 2007 <sup>1</sup>	Anticipated Q2 - 2008 <sup>1</sup>
15. Rock Harbor (N)	Anticipated Q3- 2007 <sup>1</sup>	Anticipated Q4- 2007 <sup>1</sup>	Anticipated Q4- 2007 <sup>1</sup>	Anticipated Q2 - 2008 <sup>1</sup>
16. Nauset Marsh (N)	Anticipated Q3- 2007 <sup>1</sup>	Anticipated Q4- 2007 <sup>1</sup>	Anticipated Q4- 2007 <sup>1</sup>	Anticipated Q2 - 2008 <sup>1</sup>

17. Lake Tashmoo (N)	Awaiting additional data collection	Awaiting additional data collection	Awaiting additional data collection	Awaiting additional data collection
18 Lagoon Pond (N)	Awaiting additional data collection	Awaiting additional data collection	Awaiting additional data collection	Awaiting additional data collection

1: Federal Fiscal Year Quarters: Q1- Oct-Dec; Q2- Jan-Mar; Q3- April-June; Q4- July-Sept

2: TMDL was covered under statewide TMDL meetings therefore no individual TMDL required

- FY05-06 Additional MEP Related Activities

**Update: data gathering and modeling under way in most waters identified above where draft technical report development is anticipated for FFY07.**

- Continue pre-technical assessment nutrient monitoring in additional embayments through FY05-06 in anticipation of doing modeling and preparing technical reports and TMDL's in those basins in future years.

**Update: data gathering under way in 80 embayments**

- Continue to work with EPA Region 1, other New England States, and the New England Interstate Water Pollution Control Commission to identify waters where other activities or plans are in place and can serve as "TMDL Equivalent" plans. Once identified and agreed to, these waters can be moved from Category 5 of the State Integrated List of Waters to Category 4b. TMDLs would then not be needed and existing plans would address the water quality impairment.

### **Mercury Proposal**

#### **FFY04-05**

**Update: Several meetings with Region 1 were held during FFY04 through FY05 and are continuing. In FY04 MassDEP developed an innovative project to move waters impaired from atmospheric mercury to category 4b of the integrated list. That plan was included in our revised 303d list and submitted to EPA in FFY05.**

#### **FFY05-06**

**Update: In FFY06 EPA denied that request and issued notice of its intent in the Federal Register to place these waters back in to category 5 of the integrated list. As of 01/07 MassDEP is still awaiting EPA's response to our comments and final decision.**

### **Statewide Bacteria TMDL**

#### **FFY04-05**

**Update: In FY04 and 05 MassDEP worked with Region 1 develop a statewide generic bacteria TMDL. Draft TMDLs and implementation plan were completed for all 27 watersheds. Public meetings were held on about 50% of those watersheds.**

#### **FFY05-06**

**Update: Discussions and negotiations between MassDEP, EPA-Washington, and environmental groups combined with a new court decision impacting the way TMDLs must be developed have resulted in significant delays in finalizing these documents. As of 01/07 many of these issues have been worked out however some minor legal issues and wording for the TMDLs remains to be completed. Once language is finalized MassDEP will finalize two TMDLs in a fairly short time and submit them for approval to EPA and work will begin to finalize other watersheds.**

## **Other Innovative Projects**

FFY04-05

Update: MA also participated with other New England States, Region 1, and ENSR International in the development of a simplified storm water TMDL using the impervious cover methodology. Unfortunately this did not work well for Massachusetts project application and was halted in FFY05.

- In FY 04 continue to develop and finalize nutrient TMDLs for 5 Chatham embayments, the Assabet River (13 TMDLs), the Kickemuit River and bacterial TMDLs for Muddy Creek, Frost Fish Creek. Also finalize TMDLs for the Shawsheen headwaters (habitat impairment) and Palmer River (13 bacterial TMDLs)

FFY04-05

**Update: See bullet above for update on the Assabet River and MA Estuaries Project. MA is still waiting for RI to set up public meeting on the Kickemuit TMDL and is evaluating legal options to finalize the Shawsheen headwaters TMDL. The Palmer River TMDL was finalized and approved by EPA in FFY04.**

FFY05-06

**Update: MassDEP and RIDEM completed the public process and finalized a joint TMDL for the Kickemuit River Which was approved by EPA. MassDEP has also had several negotiation sessions with MassPort and the US Air Force relative to the Shawsheen River TMDL. Although not finalized as of 01/07 it appears that the Air Force and Massport are willing to develop and provide a comprehensive plan, which will allow for this project to be submitted as a 4B project rather than a TMDL.**

- Continue work on additional TMDLs where data collection and related activities have commenced including the Nashua River, Charles River, Pomponesett Bay, Waquoit Bay sub-systems, Great, Green, Bournes and Quaboag Ponds, Oyster Harbor and Nantucket Harbor

## **Nashua River Nutrient TMDL**

FFY04-05

**Update: The Nashua model was finalized and options analysis underway.**

FFY05-06

Update: Work on the Nashua Model and TMDL has continued. As of 01/07 model runs have been completed and a draft TMDL has been developed. Our goal is to go out to comment sometime in Feb or March 2007.

## **Upper Charles River Nutrient TMDL**

FFY04-05

**Update: The Charles River Watershed Association is contracted to develop this TMDL and completed most of the data gathering in FFY04-05.**

FY05-06

**Update: Modeling work has proceeded during FFY05. Additional modeling work been subcontracted by CRWA to complete the calibration portion of this project. In addition, since this model only went from the headwaters to the Dover USGS gage additional coverage was necessary to complete the model downstream to the Watertown Dam. EPA has assisted by providing contract funding for extend the model for this purpose.**

**Also in FFY05-06 MassDEP has assisted EPA Region 1 in the development of a nutrient TMDL for**

the lower Charles River Watershed (below the Watertown dam). As of 01/07 MassDEP and EPA are finalizing the TMDL and hope to go out for public review during February or March 07.

#### **Other TMDL Related Activities**

- Develop draft and final TMDLs for Quaboag and South Ponds.  
**Update: TMDL finalized and approved**
- Connecticut River Nitrogen- NEIWPCC & EPA lead  
**Update: MassDEP continues to cooperate in this effort. In addition, in FFY06 MassDEP has awarded a contract for an outside consultant to evaluate approximately 18 POTWs in the Connecticut River, Blackstone, and Ten Mile watersheds for their ability to remove nitrogen.**
- Blackstone River Work:  
**Update: In FFY06 MassDEP has contracted with USGS to evaluate nitrogen attenuation and loading as well as sediment and metal contributions from important locations within the mainstream. This work includes the establishment of several water quality and flow gages including one at the state line. Work began in 10/06.**

#### **Combined Sewer Wet Weather Overflows (CSO's)**

##### **FFY 2004-2005 Outputs:**

- Review SRF applications for CSO funding-**Ongoing**
- Provide SRF funding to eligible projects, DEP estimates range up to \$100 million over the next two calendar years  
**Status Ongoing**
- Technical assistance to communities  
**Status Ongoing**
- Review draft and final CSO plans for compliance with the Clean Water Act and State Water Quality Standards  
**Status Ongoing**
- Review Water Quality Standard classifications for CSO-impacted receiving waters during the CSO planning process  
**Status Ongoing**
- Negotiate Orders with EPA and Court parties to establish construction schedules for CSO abatement work  
**Status Ongoing**
- Work with EPA and watershed groups to review water quality information on CSO discharges and their impacts.  
**Status Ongoing**

##### **FFY 2005-2006 Outputs:**

- Seven SRF applications were reviewed for CSO funding.
- Provide SRF funding to eligible projects, DEP estimates range up to \$150 million over the next two calendar years.
- Technical assistance was provided to 10 communities.
- Reviewed draft and finalized four CSO plans for compliance with the Clean Water Act and State Water Quality Standards.
- Review Water Quality Standard classifications for seven CSO-impacted receiving waters during the CSO planning process.
- Three Orders were negotiated with EPA and Court parties to establish construction schedules for CSO abatement work.
- Work with EPA and watershed groups to review water quality information on CSO discharges and their impacts. Six projects were evaluated during this time period.



## **Restore Mount Hope Bay: Improve Fisheries Habitat by Reducing Thermal Load at Brayton Pt**

### **FFY 2004-2005 Outputs:**

- The appeal of the conditions of the NPDES permit will require USEPA and MADEP to spend considerable time preparing briefs for submittal to the USEPA Appeals Board. It is anticipated that the appeal process could take several months or longer in 2004-2005.

**Status Ongoing**

### **FFY 2005-2006 Outputs:**

- The USEPA Environmental Appeals Board [EAB] responded to the appeal of the Brayton Point NPDES permit on FEB 1, 2006. The EAB affirmed most components of the permit; however, the EAB in its decision on the merits of the appeal issued a remand to USEPA Region 1 to address 2 administrative items [iron limits should be in mg/l not lbs/day and required the addition of an item left out of the administrative record] and 2 substantive permit conditions [explain the rationale for the 5 day temperature threshold and evaluate the sound emissions and effects from the required cooling towers]. EPA Region 1 issued its Determination on Remand back to the EAB on November 30, 2006. The permittee subsequently appealed that determination and USEPA is currently preparing a brief to be filed concerning the current appeal.

## **Environmental Goals Pilot Project for Selected Water Programs**

### **FFY 2004-2005 Outputs:**

- DEP expects to have that data live on the web by early summer 2004. Because DEP anticipates making the information available on the web, much less detail has been included in the written PPA.

**Update: Environmental Progress Report is posted on the Web.**

### **FFY 2005-2006 Outputs:**

- **Update: Environmental Progress Report is posted on the Web.**  
<http://www.mass.gov/dep/water/priorities/dwhome.htm>

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### **Drinking Water Targets**

- Set standards for safe drinking water at PWS
- Know if delivered water is meeting standards
- Assure compliance with drinking water standards
- Support private water supply safety
- Protect existing sources
- Identify and protect future sources of drinking water

### **Health and Safety Targets**

- Promote wise use of water supply we have
  - Maintain adequate pressure for fire fighting
  - Assure capacity to respond to emergencies
-

**2005 Highlights  
in meeting  
objective**

In 2005, DEP had several successes in advancing this goal. These included:

- Maintaining high compliance rates across all program areas
- Identifying unregistered public water systems and bringing them into compliance.
- Obtaining grant funds to provide testing and education for daycare facilities on lead in drinking water.
- Continuing a program to get all schools tested for lead in their drinking water.
- Encouraging and requiring completion of New System Business Plans, emergency response plans and capital improvement plans

DEP conducted these training or outreach sessions:

- Annual meeting of the Massachusetts Health Officers Association
- NEWWA Bedrock Well Courses
- Small system operator training
- Cross Connection Control
- Underground Injection control.

**2006 Highlights  
in meeting  
objective**

In 2006, DEP had several successes in advancing this goal. These included:

- Continuing to maintain high compliance rates across all program areas
- Identifying unregistered public water systems and bringing them into compliance.
- Continuing a program to get all schools tested for lead in their drinking water.
- Encouraging and requiring completion of New System Business Plans, emergency response plans and capital improvement plans
- Promoted emergency response planning

DEP conducted these training or outreach sessions:

- 4 training sessions for school superintendent on Lead plumbing in schools
- 4 cross connections training/workshops
- Fluoridation workshop
- Quarterly In the Main newsletters with compliance assistance articles
- Quarterly email from the Drinking Water Program Director with compliance assistance information
- 102 one-on-one onsite training with the assistance of 3<sup>rd</sup> party providers
- 6 mentoring sessions with the assistance of 3<sup>rd</sup> party providers
- NEWWA Bedrock Well Course

Coordinated with DCR and Office of State Geologist to conduct 6 Well Driller Trainings

## Environmental Indicators and other Performance Measures

Environmental Indicators	FY 2004	FY 2005	FY 2006
# and % of community and non-transient non-community water systems (and population served) with one or more violations of health-based requirements during the year, reported separately for violations of the Total Coliform Rule (TCR), Radionuclides, chemical contaminants, Lead and Copper Rule (LCR), Surface Water Treatment Rule (SWTR), and all other regulated contaminants <sup>1</sup>	[Reporting data in this format is not required in 2004. See next row.]	[Reporting data in this format is not required in 2005. See next row.]	[Reporting data in this format is not required in 2006. See next row.]

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<sup>1</sup> **Note:** “Health-based requirements” were interpreted as MCL violations for TCR and nitrate, failure to install optimal treatments for LCR, failure to filter for SWTR, and MCL violations for other regulated contaminants.

Environmental Indicators	FY 2004	FY 2005	FY 2006
# of: a) community drinking water systems and % of population served by community water systems, and b) non-transient, non-community drinking water systems and % of population served by such systems, with no violations during the year of any federally enforceable health-based standard (EPA will develop language clarifying meaning of “federally enforceable”)*	<p><b>For Community and Non-transient non-community systems (NTNC) only</b></p> <p><b>TCR: Community</b></p> <ul style="list-style-type: none"> <li>➤ Acute MCL – 504 systems serving 95% population;</li> <li>➤ Monthly MCL – 462 systems serving 88% population.</li> </ul> <p><b>TCR: NTNC</b></p> <ul style="list-style-type: none"> <li>➤ Acute MCL – 251 systems serving 96% population;</li> <li>➤ Monthly MCL – 236 systems serving 94% population.</li> </ul> <p><b>Nitrate: Community</b> 516 systems serving 100% population.</p> <p><b>Nitrate: NTNC</b> 252 systems serving &gt;99% population.</p> <p><b>Nitrites: Community</b> 516 systems serving 100% population.</p> <p><b>Nitrites: NTNC</b> 253 systems, 100% population.</p> <p><b>Radiological: Community</b> 513 systems serving &gt;99% population.</p> <p><b>Radiological: NTNC</b> N/A</p> <p><b>IOC: Community</b> 516 systems, 100% population.</p> <p><b>IOC: NTNC</b> 252 systems serving 99% population.</p> <p><b>STAGE 1 DBPR: Community</b> 513 systems serving 99% population.</p> <p><b>STAGE 1 DBPR: NTNC</b> 253 systems serving 100% population</p> <p><b>SOC: Community</b> 516 systems, 100% population.</p> <p><b>SOC: NTNC</b> 253 systems, 100% population.</p> <p><b>VOC: Community</b> 515 systems serving &gt;99% population.</p> <p><b>VOC: NTNC</b> 252 systems serving &gt;99% population.</p> <p><b>LCR: Community</b> 504 systems serving 98% population.</p> <p><b>LCR: NTNC</b> 249 systems serving 98% population.</p> <p><b>SWTR/IESWTR: Community</b> 164 systems serving 99% population.</p> <p><b>SWTR/IESWTR: NTNC</b> 3 systems serving 100% population.</p>	<p><b>For Community and Non-transient non-community systems (NTNC) only</b></p> <p><b>TCR: Community</b></p> <ul style="list-style-type: none"> <li>➤ Acute MCL – 511 systems serving 99% population;</li> <li>➤ Monthly MCL – 478 systems serving 94% population.</li> </ul> <p><b>TCR: NTNC</b></p> <ul style="list-style-type: none"> <li>➤ Acute MCL – 248 systems serving &gt;99% population;</li> <li>➤ Monthly MCL – 237 systems serving 98% population.</li> </ul> <p><b>Nitrate: Community</b> 514 systems serving 100% population.</p> <p><b>Nitrate: NTNC</b> 249 systems serving 100% population.</p> <p><b>Nitrites: Community</b> 514 systems serving 100% population.</p> <p><b>Nitrites: NTNC</b> 249 systems, 100% population.</p> <p><b>Radiological: Community</b> 510 systems serving &gt;99% population.</p> <p><b>Radiological: NTNC</b> N/A</p> <p><b>IOC: Community</b> 516 systems, 100% population.</p> <p><b>IOC: NTNC</b> 249 systems serving 100% population.</p> <p><b>STAGE 1 DBPR: Community</b> 507 systems serving 99% population.</p> <p><b>STAGE 1 DBPR: NTNC</b> 249 systems serving 100% population</p> <p><b>SOC: Community</b> 514 systems, 100% population.</p> <p><b>SOC: NTNC</b> 249 systems, 100% population.</p> <p><b>VOC: Community</b> 513 systems serving &gt;99% population.</p> <p><b>VOC: NTNC</b> 249 systems serving 100% population.</p> <p><b>LCR: Community</b> 502 systems serving 97% population.</p> <p><b>LCR: NTNC</b> 244 systems serving 96% population.</p> <p><b>SWTR/IESWTR: Community</b> 166 systems serving 99% population.</p> <p><b>SWTR/IESWTR: NTNC</b> 5 systems serving 100% population.</p>	<p><b>For Community and Non-transient non-community systems (NTNC) only</b></p> <p><b>TCR: Community</b></p> <ul style="list-style-type: none"> <li>➤ Acute MCL – 516 systems serving 99% population;</li> <li>➤ Monthly MCL – 487 systems serving 95% population.</li> </ul> <p><b>TCR: NTNC</b></p> <ul style="list-style-type: none"> <li>➤ Acute MCL – 251 systems serving &gt;99% population;</li> <li>➤ Monthly MCL – 241 systems serving 96% population.</li> </ul> <p><b>Nitrate: Community</b> 514 systems serving 100% population.</p> <p><b>Nitrate: NTNC</b> 249 systems serving 100% population.</p> <p><b>Nitrites: Community</b> 514 systems serving 100% population.</p> <p><b>Nitrites: NTNC</b> 249 systems, 100% population.</p> <p><b>Radiological: Community</b> 518 systems serving 99% population.</p> <p><b>Radiological: NTNC</b> N/A</p> <p><b>IOC: Community</b> 515 systems, 99% population.</p> <p><b>IOC: NTNC</b> 250 systems serving 99% population.</p> <p><b>STAGE 1 DBPR: Community</b> 514 systems serving 99% population.</p> <p><b>STAGE 1 DBPR: NTNC</b> 252 systems serving 100% population</p> <p><b>SOC: Community</b> 521 systems, 100% population.</p> <p><b>SOC: NTNC</b> 252 systems, 100% population.</p> <p><b>VOC: Community</b> 521 systems serving 100% population.</p> <p><b>VOC: NTNC</b> 252 systems serving 100% population.</p> <p><b>LCR: Community</b> 512 systems serving 98% population.</p> <p><b>LCR: NTNC</b> 247 systems serving 96% population.</p> <p><b>SWTR/IESWTR: Community</b> 168 systems serving 99% population.</p> <p><b>SWTR/IESWTR: NTNC</b> 0 systems serving 100% population.</p>

\* ECOS Core Performance Measure

Environmental Indicators	FY 2004	FY 2005	FY 2006
# of waterborne disease outbreaks ( <i>Cryptosporidium</i> , <i>Giardia</i> , <i>enteric virus</i> and <i>bacteria</i> )	No outbreaks.	No outbreaks.	No outbreaks.

Outcomes	FY 2004	FY 2005	FY 2006
<b>Estimated number of community water systems (and estimated % of population served) implementing a multiple barrier approach to prevent drinking water contamination (EPA and States will expeditiously define “multiple barrier approach”)*</b>	522 community public water systems (100%) have multiple barriers (more than 1 barrier) to prevent drinking water contamination. Multiple barriers may include source protection, source water assessments (SWAP), treatment (including disinfection), distribution protection, adequate capacity, and certified operators. Specific tabulations for each of these barriers are included elsewhere in this report. Program descriptions, policies, and standard operation procedures for each of these barriers were previously provided to EPA.	514 community public water systems (100%) have multiple barriers (more than 1 barrier) to prevent drinking water contamination. Multiple barriers may include source protection, source water assessments (SWAP), treatment (including disinfection), distribution protection, adequate capacity, and certified operators. Specific tabulations for each of these barriers are included elsewhere in this report. Program descriptions, policies, and standard operation procedures for each of these barriers were previously provided to EPA.	525 community public water systems (100%) have multiple barriers (more than 1 barrier) to prevent drinking water contamination. Multiple barriers may include source protection, treatment (including disinfection), distribution protection, adequate capacity, and certified operators. Specific tabulations for each of these barriers are included elsewhere in this report. Program descriptions, policies, and standard operation procedures for each of these barriers were previously provided to EPA.
<b># and % of systems with approved distribution protection plans*</b>	522 COM (100%) 249 out of 255 NTNC (97.6%) 892 out of 934 TNC (95.5%)	514 COM (100%) 247 out of 249 NTNC (99.2%) 909 out of 930 TNC (97.7%)	519 out of 521 COM (99.6%) 240 out of 252 NTNC (95.2%) 886 out of 945 TNC (93.8%)
<b># and % of systems with boil orders for bacteria that are returned to compliance</b>	Six systems out of 1,691 (0.4%)	Four systems out of 1,693 (0.2%)	Fourteen systems out of 1,718 (0.8%)
<b># of newly identified systems with MCL violations<sup>2</sup></b>	<ul style="list-style-type: none"> <li>3 systems (COM: Acute MCL violation for TCR; COM: Monthly MCL violation for TCR; TNC: Both Acute MCL and Monthly MCL violations for TCR)</li> </ul>	<ul style="list-style-type: none"> <li>2 systems (NTNC: Monthly MCL violation for TCR; TNC: Monthly MCL violation for TCR)</li> </ul>	<ul style="list-style-type: none"> <li>2 systems (COM: Monthly MCL violation for TCR; TNC: Acute MCL violation for TCR)</li> </ul>
<b># and % of systems exceeding the lead action level</b>	57 systems (7%) (Community and NTNC in most recent monitoring round)	68 systems (9%) (Community and NTNC in most recent monitoring round)	77 systems (10%) (Community and NTNC in most recent monitoring round)
<b># and % of exceedances of the Action Level for lead resolved as a result of the DEP/DPH Referral Program for Lead Poisoned Children</b>	<ul style="list-style-type: none"> <li>None reported in FFY2004</li> </ul>	<ul style="list-style-type: none"> <li>None reported in FFY2005</li> </ul>	<ul style="list-style-type: none"> <li>None reported in FFY2006</li> </ul>
<b># and % of systems with improved capacity</b>	<p><b>Community and Non-transient non-community systems:</b></p> <p>157 systems (21%). This includes 19 during CCE inspections; 108 that received capacity assessments with a sanitary survey; and 30 systems that received SRF funding.</p> <p><b>Transient non-community systems:</b></p> <p>56 systems (7%) that received CCE inspections with preliminary capacity review.</p>	<p><b>Community and Non-transient non-community systems:</b></p> <p>175 systems (23%). This includes 38 during CCE inspections; 123 that received capacity assessments with a sanitary survey; and 14 systems that received SRF funding.</p> <p><b>Transient non-community systems:</b></p> <p>28 systems (3%) that received CCE inspections with preliminary capacity review.</p>	<p><b>Community and Non-transient non-community systems:</b></p> <p>270 systems (35%). This includes 253 that received capacity assessments during a sanitary survey; and 17 systems that received SRF funding.</p> <p><b>Transient non-community systems:</b></p> <p>37 systems (4%) that received sanitary survey inspections with a capacity review</p>

\* ECOS Core Performance Measure

<sup>2</sup> **Note:** “Health-based requirements” were interpreted as MCL violations for TCR and nitrate, failure to install optimal treatments for LCR, failure to filter for SWTR, and MCL violations for other regulated contaminants.

Outcomes	FY 2004	FY 2005	FY 2006
# and % of systems with certified operator	● 1,611 (95.3%) (Primary operators)	● 1,635 (96.6%) (Primary operators)	● 1,646 (95.8%) (Primary operators)
# and % of systems who completed Consumer Confidence Reports	499 (96.7%)	508 (98.8%)	521 (100%)

Outputs	FY 2004	FY 2005	FY 2006
# of Comprehensive Compliance Evaluations (CCEs)	19 CCE surveys were completed.	38 CCE surveys were completed.	35 CCE surveys were completed.
Progress on DEP/EPA developed pilot program for risk-based program	DEP is continuing to use its' risk based criteria to select sanitary surveys. The selection criteria are public health related, based on the documented compliance history of all community and non-transient non-community systems and use data available in the state database. For more details on this program see <a href="http://www.mass.gov/dep/brp/epp/dw/ascomwp.html">http://www.mass.gov/dep/brp/epp/dw/ascomwp.html</a> .	DEP is continuing to use its' risk based criteria to select sanitary surveys. The selection criteria are public health related, based on the documented compliance history of all community and non-transient non-community systems and use data available in the state database. For more details on this program see <a href="http://www.mass.gov/dep/water/priorities/ascomwp.htm">http://www.mass.gov/dep/water/priorities/ascomwp.htm</a> .	DEP is continuing to use its' risk based criteria and the 3 year cycle to prioritize sanitary surveys. The selection criteria are public health related, based on the documented compliance history of all community and non-transient non-community systems and use data available in the state database. For more details on this program see <a href="http://www.mass.gov/dep/water/priorities/ascomwp.htm">http://www.mass.gov/dep/water/priorities/ascomwp.htm</a> .
# of sanitary surveys	164 sanitary surveys were completed, including 3 Comprehensive Performance Evaluations (CPE). Additionally, 798 self surveys from TNCs were received.	161 sanitary surveys were completed, including 3 Comprehensive Performance Evaluations (CPE). Additionally, 28 self surveys from TNCs were received.	260 sanitary surveys were completed, including 2 Comprehensive Performance Evaluations (CPE).
# of UIC inspections, wells returned to compliance, and outreach events (1999 text)	42 Registrations with out inspection 33 Inspections; 26 Enforcement actions (18 notices of noncompliance (NONs) & 8 higher level enforcement (HLE) 66 UIC wells returned to compliance: 35 Non-voluntary (after enforcement); 31 Voluntary (without enforcement); 18 Outreach events	98 Registrations without inspection 751 Inspections; 178 Enforcement actions; 138 UIC wells returned to compliance: 42 Non-voluntary (after enforcement); 27 Voluntary (without enforcement); 16 Outreach events  Note: FFY05 is the first year to include reporting of UIC activities conducted by other MassDEP programs.	54 Registrations without inspection 412 Inspections; 243 Enforcement actions; 242 UIC wells returned to compliance: 143 Non-voluntary (after enforcement); 99 Voluntary (without enforcement); 12 Outreach events
# of on-site laboratory audits/inspections	52 inspections total (16 chemistry on-site inspections and 36 microbiology inspections) were conducted for laboratories performing analysis of drinking water.	48 inspections total (16 chemistry on-site inspections and 32 microbiology inspections) were conducted for laboratories performing analysis of drinking water.	48 inspections total (22 chemistry on-site inspections and 25 microbiology inspections) were conducted for laboratories performing analysis of drinking water.

Outputs	FY 2004	FY 2005	FY 2006
<p><b># of laboratories certified for microbiological and chemical analyses under the SDWA certification program</b></p> <p><b>In 2004, DEP will maintain commitment to timely on-site drinking water laboratory audits/inspections – all remaining state microbiological laboratories will be complete by Dec 31, 2004 (app. 36 inspections in 2004)</b></p>	<p><b>In-state Laboratories</b> 83 laboratories are located in Massachusetts: 32 are certified to analyze one or more chemical contaminants in potable water; 69 are certified to analyze for microbiological contaminants.</p> <p><b>Out-of-state Laboratories</b> There are 58 laboratories located outside Massachusetts: 56 are certified to analyze one or more chemical contaminants in potable water; 10 are certified to analyze for microbiological contaminants.</p> <p>By December 31, 2004, the Laboratory Certification Office (LCO) had completed all outstanding microbiology on-site inspections.</p> <p>The decrease in the number of chemistry on-site inspections during FFY2004 is the result of the need to dedicate time and resources to the review and approval of laboratories to analyze drinking water for low-level perchlorate and to the review of data packages from the analysis of drinking water for low-level perchlorate. Despite the decreased frequency of chemistry inspections, all certified chemistry laboratories have been inspected well within the past three years. Current staffing permits the LCO to maintain, at the least, a three-year inspection cycle for both microbiology and chemistry laboratories as required by EPA.</p>	<p><b>In-state Laboratories</b> 79 laboratories are located in Massachusetts: 35 are certified to analyze one or more chemical contaminants in potable water; 70 are certified to analyze for microbiological contaminants.</p> <p><b>Out-of-state Laboratories</b> There are 51 laboratories located outside Massachusetts: 51 are certified to analyze one or more chemical contaminants in potable water; 10 are certified to analyze for microbiological contaminants.</p> <p>As of December 31, 2004, all microbiology laboratories have been inspected within the last three years and the inspection schedule is on track as agreed to in the Performance Partnership Agreement.</p> <p>Both chemistry and microbiology inspections continue on a schedule to ensure at least a three-year cycle of inspections.</p>	<p><b>In-state Laboratories</b> 81 laboratories are located in Massachusetts: 34 laboratories (including 1 radiochemistry laboratory) are certified to analyze one or more chemical contaminants in potable water; 69 are certified to analyze for microbiological contaminants.</p> <p><b>Out-of-state Laboratories</b> There are 48 laboratories located outside Massachusetts: 47 laboratories (including 4 radiochemistry laboratories) are certified to analyze one or more chemical contaminants in potable water; 11 are certified to analyze for microbiological contaminants.</p> <p>Both chemistry and microbiology inspections continue on a schedule to ensure at least a three-year cycle of inspections.</p>
<b># of capacity development reviews</b>	<p><b>Community and Non-transient non-community systems:</b> 157 systems (21 %).</p> <p><b>Transient non-community systems:</b> 56 systems (7%).</p>	<p><b>Community and Non-transient non-community systems:</b> 166 systems (22 %).</p> <p><b>Transient non-community systems:</b> 30 systems (3 %).</p>	<p><b>Community and Non-transient non-community systems:</b> 253 systems (32%).</p> <p><b>Transient non-community systems:</b> 37 systems (4 %).</p>
<b># of operators certified or recertified</b>	● 4,542	● 3,952	● 4,231
<b># of water quality monitoring reports reviewed</b>	- 30,000 (Estimate)	- 30,000 (Estimate)	- 30,000 (Estimate)
<b># of monitoring waivers reviewed and granted</b>	504 VOC waiver applications reviewed and 260 granted. 590 IOC waiver applications reviewed and 493 granted. 602 SOC waiver applications reviewed and 485 granted.	369 VOC waiver applications reviewed and 165 granted. 404 IOC waiver applications reviewed and 377 granted. 726 SOC waiver applications reviewed and 635 granted.	2006 is the second year of a 3 year cycle. Just about all of the waivers were given out in the first year. Only 12 sources were approved for SOC in 2006.



<b>Outputs</b>	<b>FY 2004</b>	<b>FY 2005</b>	<b>FY 2006</b>
<b>Regulatory changes</b>	<p>On 4/23/04, DEP issued final regulations revising the Drinking Water Regulations (310 CMR 22.00) to incorporate technical corrections to sections 22.20.A and 22.20D, based on the EPA review of the Primacy Package for the Interim Enhanced Surface Water Treatment Rule.</p> <p>Additionally, on 4/23/04 DEP issued final regulations revising the Laboratory Certification Regulations (310 CMR 42.00) to incorporate technical corrections to sections 42.05 and 42.19, based on the EPA review of the Primacy Package for the Disinfectants/ Disinfection Byproducts Rule.</p>	None.	None related to federal SDWA.
<b>Increased level of enforcement</b>	DEP continued to implement its enforcement strategy and use electronic tools to expedite enforcement. DEP updated its Drinking Water Comprehensive compliance evaluation to remove the 6-month enforcement forbearance for newly discovered existing TNCs with large daily consumer rates. DEP targeted transient non-community systems with large daily consumer rates for registration evaluation and enforcement. e.g. gas stations	DEP continued to implement its enforcement strategy and use electronic tools to expedite enforcement. DEP targeted daycare facilities that were unregistered public water systems, for registration and enforcement.	DEP continued to implement its enforcement strategy and use electronic tools to expedite enforcement. Unregistered systems and Daycare facilities continued to be a priority as well as the new state rule, perchlorate.

Outputs	FY 2004	FY 2005	FY 2006
<b>Technical assistance to public water suppliers</b>	<p>235 technical assistance visits to public water systems as part of the SWAP Program outreach.</p> <p>10 surface water supply plans developed.</p> <p>5 Vegetation Management Panel (VMP) technical assistance meetings.</p> <p>Technical assistance provided on 1 open space plan, 3 storm water management plans, and 1 forest management plan and 2 water supply protection by-laws. 3 meetings/conferences on community participation in drinking water protection</p> <p>186 technical electronic training encounters on distribution protection were completed.</p> <p>In addition, 369 public water systems had 494 technical assistance encounters as a result of SRF set-asides funding.</p> <p>13 water systems (55 sources) received wellhead protection compliance assistance. 8 water systems received assistance to develop wellhead protection plans. 56 water systems were assisted with source water protection criteria for use with monitoring waivers. 6 systems were assisted with source protection conditions for their water management permits. 31 communities were assisted with wellhead protection issues related to zoning, health regulations, land uses, land acquisition, storm water run off and EOEa land acquisition grant application. 18 UIC trainings conducted and 3 guidance documents issued.</p>	<p>17 technical assistance visits to public water systems as part of the SWAP Program outreach (new systems).</p> <p>11 surface water supply plans developed.</p> <p>6 Vegetation Management Panel (VMP) technical assistance meetings.</p> <p>Technical assistance provided on 1 open space plan, 2 storm water management plans, and 1 forest management plan and 4 water supply protection by-laws. 3 meetings/conferences on community participation in drinking water protection.</p> <p>286 technical electronic training encounters on distribution protection were completed. 248 public water systems attended one of three cross connection workshops.</p> <p>In addition, 301 public water systems had 405 technical assistance encounters as a result of SRF set-asides funding.</p> <p>54 water systems (92 sources) received wellhead protection compliance assistance. 7 water systems received assistance to develop wellhead protection plans. 221 water systems were assisted with source water protection criteria for use with monitoring waivers. 10 systems were assisted with source protection conditions for their water management permits. 30 communities were assisted with wellhead protection issues related to zoning, health regulations, land uses, land acquisition, storm water run off and EOEa land acquisition grant application. 16 UIC technical assistance trainings conducted; UIC registration forms updated and several fact sheets released.</p>	<p>2 surface water supply plans developed.</p> <p>4 Vegetation Management Panel (VMP) technical assistance meetings.</p> <p>Technical assistance provided on 2 open space plan, 1 storm water management plans, and 1 forest management plan and 57 water supply protection by-laws. 3 meetings/conferences on community participation in drinking water protection.</p> <p>Responded to approximately 500 requests for source protection technical assistance. 292 technical electronic training encounters on distribution protection were completed. 255 public water systems attended one of three cross connection workshops.</p> <p>In addition, 301 public water systems had 405 technical assistance encounters as a result of SRF set-asides funding.</p> <p>47 sources received wellhead protection compliance assistance. 3 water systems received assistance to develop wellhead protection plans. 221 water systems were assisted with source water protection criteria for use with monitoring waivers. 10 systems were assisted with source protection conditions for their water management permits. 52 communities were assisted with wellhead protection issues related to zoning, health regulations, land uses, land acquisition, storm water run off and EOEa land acquisition grant application. 12 UIC technical assistance trainings conducted; UIC DRAFT Primacy Package negotiations completed with EPA and fact Sheets developed in coordination with other DEP programs and other state agencies on specific well types.</p>

Outputs	FY 2004	FY 2005	FY 2006
<b>In 2004 DEP will: a) work with MWRA and member communities to address comments on MWRA's sampling plan for lead and copper; b) respond to an invalidation request by MWRA on the September 03 sampling; c) establish water quality control parameters for optimal corrosions control treatment; d) address any item relating to the MWRA's notice of noncompliance and compliance with the Lead and Copper Rule; and e) continue to coordinate with EPA to address regional and national inquiries relating to overall compliance with the Lead and Copper Rule.</b>	DEP a) worked with MWRA and member communities to address comments on MWRA's sampling plan for lead and copper; b) responded to an invalidation request by MWRA on the September 03 sampling; c) set out a plan to establish water quality control parameters for optimal corrosions control treatment; d) addressed MWRA's notice of noncompliance and compliance with the Lead and Copper Rule; and e) continued to coordinate with EPA develop and provide training for MA PWSs on compliance with the Lead and Copper Rule.	N/A	N/A
<b># of GWUDI, # sources EXEMPT by GIS Methods; # of Sources exempt by field evaluation: # GWUDI sources NON-EXEMPT</b>	In 2004 there were 1501NTNCs <ul style="list-style-type: none"><li>Sources potentially subject to the GWUDI. Of these, 1454 were exempt by field evaluation. 47 sources were not exempt. Of the 47 non-exempt sources 9 are conducting MPA testing, 1 system/source is planning to install filtration and 37 system/sources are in the process of deciding an action plan.</li></ul>	<ul style="list-style-type: none"><li>In 2005 there were 1499 non-community groundwater sources. Of these, 1450 were exempt by field evaluation. 47 sources were not exempt. Of the non-exempt sources 5 were closed, 15 are conducting MPA testing, 11 are making source improvements or replacing the well, 2 are planning to install filtration and 14 are still deciding on an action plan.</li></ul>	<ul style="list-style-type: none"><li>In 2006 there were 1923 non-community groundwater sources. Of these, 1450 were exempt by field evaluation. 41 sources were not exempt. Of the non-exempt sources 6 were closed, 14 are conducting MPA testing, 11 are making source improvements or replacing the well, 2 are planning to install filtration and 14 are still deciding on an action plan.</li></ul>
<b># of loans to assist in achieving compliance with SDWA requirements</b>	<ul style="list-style-type: none"><li>28 loans</li></ul>	<ul style="list-style-type: none"><li>22 loans</li></ul>	<ul style="list-style-type: none"><li>32 loans</li></ul>
<b># of source protection plans reviewed and approved</b>	33 source protection plans reviewed and approved (33 ground water).	18 source protection plans reviewed and approved (7 ground water; 11 surface water).	5 source protection plans reviewed and approved (3 ground water; 2 surface water).
<b># of source water assessments</b>	645 final assessment reports	17 final assessment reports (new systems)	Program completed in prior year.
<b># of Water Management Act (WMA) permits for sources pumping more than 100,000 gallons per day</b>	14 WMA permits and 5 WMA permit amendments were issued.	6 WMA permits were issued (no WMA permit amendments).	12 WMA permits and 10 WMA permit amendments were issued.

- Trend Analysis**

### DRINKING WATER

From 1999 to 2006 several trends emerge in DEP's work to advance the goal of ensuring that every public water supply consistently provides water that is safe to drink. See

<http://www.mass.gov/dep/water/priorities/dwhome.htm>.

### ***List of References of work products submitted or available***

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#### **Work products**

- In The Main - Quarterly newsletter had 43 articles to educate the PWS and consultants about DW issues.
  - Drinking Water Director's quarterly email to public water systems with email addresses
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#### **DEP promoted the following events**

- Annual Compliance Awards Program - Governor proclamations to 36 winning systems brings awareness to the public of importance of DW.
  - Theatre for Children presentations at local schools- May 8-12, 2006, held 39 performances at 18 schools to teach children importance of drinking water.
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### Goal 3: Preserve and Restore the Land

- *Environmental Indicators and other Performance Measures*
  - **Proper Management of Hazardous and Solid Waste**  
*Environmental Indicators and other Performance Measures*

Outcomes	BASELINE	YEAR PRIOR TO MOST RECENT	MOST RECENT DATA
<b>Tons of hazardous waste shipped by Large Quantity Generators</b> (Based on the most recent National Biennial Report) The next report will be submitted in CY 2008 and will cover CY 2007. The full reports can be found at: <a href="http://www.epa.gov/epaoswer/hazwaste/data/br05/index.htm">http://www.epa.gov/epaoswer/hazwaste/data/br05/index.htm</a>	Based on Biennial Report covering CY 1999 submitted in CY 2000	In 2003: 60,567 tons shipped  Based on Biennial Report covering CY 2003 submitted in CY 2004 (Most up to date data)	In 2005: 70,051 tons shipped  Based on Biennial Report covering CY 2005 submitted in CY 2006 (Most up to date data)
<b>Weight or volume of household hazardous wastes collected and reused, recycled or properly disposed</b>	13,367 tons in CY 2003	9,330 tons in CY2004	18,089 tons in CY 2005
<b>Total (# of tons) municipal solid waste generated</b> (This data is from the Solid Waste Master Plan, 2006 revision that can be found at: <a href="http://www.mass.gov/dep/recycle/priorities/dswmpu01.htm">http://www.mass.gov/dep/recycle/priorities/dswmpu01.htm</a> . The Annual Progress Report covering CY 2005 will be posted on that site when it is available (expected summer 2007)	CY2000: 7,990,000 tons	CY2003: 8,460,000 tons	CY2004: 8,720,000 tons
<b>Annual amount (# of tons) of solid waste diverted relative to the amount generated.</b> (This data is from the Solid Waste Master Plan, 2006 Revision)	CY2000:  All Waste: 6,500,000 tons= 50%  MSW Only: 2,700,000 tons= 34%	CY2003:  All Waste: 6,860,000 tons= 52%  MSW Only: 2,870,000 tons= 34%	CY 2004:  All Waste: 7,580,000 tons= 54%  MSW Only: 3,070,000 tons= 35%
<b>Amount of solid waste disposed in landfills, resource recovery facilities relative to the total generated in-state</b> (This data is from the Solid Waste Master Plan, 2006 Revision)	CY2000  All Waste: 6,460,000 tons = 50%  MSW Only: 5,290,000 tons= 66%	CY2003:  All Waste: 6,340,000 tons = 48%  MSW Only: 5,590,000 tons = 66%	CY 2004:  All Waste: 6,360,000 tons = 46%  MSW Only: 5,650,000 tons = 65%
<b># of unlined landfills properly closed with impermeable caps</b>	BASELINE:  In 1991 over 100 unlined landfills were operating. All these Landfills have been closed properly capped. Ongoing capping is for the closure of cells at active lined landfills as they reach capacity	In CY 05 117 acres were capped at active landfills	In CY 06 38.3 acres were capped at active landfills

Outcomes	BASELINE	YEAR PRIOR TO MOST RECENT	MOST RECENT DATA
# of landfill sites authorized for reuse for open space and/or recreation	There are potentially hundreds of old landfill sites that could be developed for post-closure use.  In FFY02, a total of 3 landfill sites were authorized for reuse.	In FFY05 12 landfill sites were authorized for new or modified reuse activities	In FFY06 12 landfill sites were authorized for new or modified reuse activities

## Objective

- **Waste and Toxics Use Reduction**

*Environmental Indicators and other Performance Measures*

Outputs	2 YEARS PRIOR TO MOST RECENT DATA YEAR	YEAR PRIOR TO MOST RECENT	MOST RECENT DATA
Amount of solid waste diverted from the waste stream through Bottle Bill redemptions	78,097 tons in CY 2003	80,863 tons in CY2004	79,475 tons in CY 2005
Grant dollars distributed	Distributed in \$2.15 Million calendar year 2004  \$1 million in recycling equipment and consumer education grants  \$750,000 in grant assistance to redemption centers  \$142,000 in assistance to business recycling and research  153,500 in Recycling Industry Reimbursement Credit  \$100,000 in waste reduction research and pilots	Distributed \$2.0 million in CY2005:  \$600,000 in recycling equipment, technical assistance and consumer education grants  \$1.265 million in grant assistance to redemption centers  \$35,000 in recycling assistance to businesses  50,000 in Recycling Industry Reimbursement Credit  \$30,000 in waste reduction research and pilots	Distributed \$2.5 million in CY2006:  \$830,000 in recycling equipment, technical assistance and consumer education grants  \$1.3 million in grant assistance to redemption centers  \$35,000 in recycling assistance to businesses  40,000 in Recycling Industry Reimbursement Credit  \$141,000 in waste reduction research and pilots  \$50,000 in climate protection grants  \$25,000 in idling reduction campaign kits  \$50,000 in diesel retrofit grants

## Trend Analysis

### SOLID WASTE MANAGEMENT

Based on the most recent data available, Massachusetts overall waste reduction rate has increased from 57% in 2002 to 60% in 2004. The state's goal is to reach a 70 % waste reduction rate by the year 2010. Massachusetts also has set a goal to reach a 56 percent overall recycling rate by 2010. The overall recycling rate increased slightly from 47 percent in 2002 to 48 percent in 2004. CY 2005 data should be available in the summer of 2007

In 2004, total waste generation increased five percent from 2003. This compares to a two percent increase from 2000 to 2003. The amount of waste disposed in 2004 increased by 0.3 percent from 2003. From 2000 to 2004, total disposal has essentially remained level, between 6.3 and 6.5 million pounds. The

state's MSW recycling rate (excluding home composting) increased slightly from 34 % in 2003 to 35% in 2004. Other diversion of construction and demolition debris, which includes use in inactive landfill closures and as landfill daily cover, increased from 300,000 tons in 2000 to 860,000 tons in 2004.

## Environmental Indicators and other Performance Measures

Environmental Indicators	Baseline	Year Before Most Recent Data	Most Recent Data	
<b>Releases of hazardous air pollutants by Large Quantity Toxics Users (as reported under TURA program)</b>	Air releases of hazardous air pollutants decreased by 62% from 1990 to 2001, from 15.7 to 5.9 million pounds	CY 2003:  Air releases of hazardous air pollutants decreased by 69 % from 1990 to 2003, from 15.7 to 4.9 million pounds	CY 2004:  Air releases of hazardous air pollutants decreased by 52 % from 1990 to 2004, from 15.7 to 7.5 million pounds	
<b>Fresh water fish tissue concentrations of mercury</b>  The full report can be found at: <a href="http://www.mass.gov/dep/toxics/types/hgres.htm#monitoring">http://www.mass.gov/dep/toxics/types/hgres.htm#monitoring</a>	CY1999 or 2001  Mean Fish tissue Mercury concentrations in Mg/kg		CY2003 or CY2004  Mean Fish tissue Mercury concentrations in Mg/kg	
	Northeast		Northeast	
	Large Mouth Bass	.90	Large Mouth Bass	.64
	Yellow Perch	.47	Yellow Perch	.29
	Rest of State		Rest of State	
	Large Mouth Bass	.59	Large Mouth Bass	.48
	Yellow Perch	.51	Yellow Perch	.40

*This chart summarizes the most recent toxics use reduction data available as of May 2007. CY 2004 data will be available in the summer of 2007. The Annual TURA Information Releases reports can be found at:*  
<http://www.mass.gov/dep/toxics/priorities/priorities.htm#tura>

Outcomes	BASELINE	Year Before Most Recent Data	Most Recent Data
<b>% of non-product outputs reduced for TURA reporters</b>	Reductions CY 2000 – 2001 =13%	Reductions CY2000 – C2003 = 22%	Reductions CY2000 – C2004 = 19
<b>% of non-product outputs reduced for TURA reporters with waste normalized for production</b>	Reductions CY 2000 – 2001 = 9% adjusted for production -	Reductions CY2000 – C2003=12% adjusted for production	Reductions CY2000 – C2004 = 9 %
<b>Quantity (# of lbs.) of toxics used and generated as waste by-products (calendar year) (2000 Core Group)</b>	CY 2000 Use: 1032 million pounds By product: 123 million pounds	CY 2003 Use: 918 million pounds Byproduct: 96 million pounds	CY 2004 Use: 842 million pounds Byproduct: 99 million pounds

## Trend Analysis

### MERCURY TRENDS

Over the past 7 years, MassDEP has engaged in an aggressive effort to evaluate mercury levels in the environment and to divert mercury from the waste streams. This work has included a mix of education and outreach, one time and ongoing collection projects, changes to regulations governing emissions from power plants, municipal waste combustors and dentists, and a new statute, the Massachusetts Mercury Management Act in 2006, which requires end of life recycling for all mercury containing products, and bans the sale and purchase by state and local governments of certain mercury containing products.

### Collection Projects



- In the early 2000s MassDEP sponsored one time collections of dental mercury, thermostats, thermometers, and school clean outs that resulted in the removal of 2417 pounds of mercury. Since that time the municipal waste combustors have been managing
- Municipal waste combustors (MWCs) were required to implement material separation plans in 2001. In the first year, implementation of these plans which involve supporting collection programs, resulted in diverting from the waste stream 1,853.6 pounds of mercury contained in thermometers, switches, thermostats, fluorescent lamps and bulbs, and other miscellaneous products. This program has continued: In CY 2005 these plans diverted 1027 pounds of mercury from the waste stream, and 1529 was removed in CY2006. Absent this requirement, much of this mercury would have ended up as air pollution.

#### **Regulatory and Statutory Changes**

- In 1998, MassDEP promulgated stringent mercury emission limits on municipal waste combustors (MWCs) that were estimated to reduce mercury emissions from these facilities by 85%. The air pollution controls were in place by CY 2001.  
TURA data shows that the combination of the emission controls and material separation plans have had a significant impact on Mercury emissions from MWCs: prior to this regulation it was estimated that MWCs emitted 5860 pounds of mercury annually. In CY 2002 they released 538 pounds whereas in CY 2004 (most recent data) this had dropped to 386 pounds.
- In 2004 MassDEP worked with the Massachusetts Dental Society and dental offices to develop and implement a plan for dental offices to install amalgam separators, recycle all mercury-containing materials, and adopt best management practices voluntarily. Approximately 2/3rds of the dentists participated in the program and collectively prevented the discharge to wastewater of an estimated 220 pounds of mercury annually. In April 2006 the regulations became final, and all of the dentists were required to install amalgam separators.
- Also in 2004 MassDEP promulgated stringent mercury emission limits on major power plants that will require the removal of 85% of the mercury in the emissions by 2008 and 95% removal by 2012. Total annual mercury emissions from these plants are expected to drop from 185 pounds per year currently to 86 pounds per year in 2008 to 29 pounds per year in 2012.
- 26 municipalities have adopted ordinances banning the disposal of mercury bearing items;
- In 2006 the Massachusetts General Court passed the Massachusetts Mercury Management Act (Chapter 190 of the Acts of 2006). The Act is designed to keep mercury out of our trash and wastewater, where it is released into the environment. The law requires manufacturers of products to Notify MassDEP of Mercury content in products sold or distributed in Massachusetts containing mercury, to collect “end of life” products and to recycle the mercury, and bans the sale of certain products containing mercury including certain measuring devices and switches and relays, prohibits the disposal of mercury containing products in trash or wastewater, and requires labeling on mercury containing products. The law also establishes specific requirements for mercury switches in vehicles, and for lamps that contain mercury.

#### **Education and Technical Assistance Programs**

- MassDEP has worked with hospitals through onsite audits to educate them and to implement policy changes concerning solid, hazardous, and infectious waste management and pollution prevention measures. In particular, DEP strongly encouraged hospitals to reduce the use of mercury and PVC containing products, and institute safe collection, labeling, and recycling practices for unneeded mercury and PVC containing products.
- DEP provided a technical assistance grant to the South Central Recycling Association of Massachusetts for mercury audits, clean-outs and purchase of mercury-free replacement products at East Longmeadow High School and the Southwick School District.
- Continued DEP staffing of the Mercury Hotline, answering calls from residents about proper disposal of mercury, mercury spills, etc
- Maintenance of the MassDEP mercury website which provide information about mercury hazards, sources, safe management practices, and environmental loadings <http://www.mass.gov/dep/toxics/stypes/hgres.htm>.

This work has paid off: The Massachusetts Water Resources Authority (MWRA) has seen a marked drop in mercury

concentrations in its sewage sludge: MWRA's Biosolid Pellet Analysis from February 04 through January 06 and show that the mercury levels have dropped from a high of 4.4 mg/kg, dry weight basis (May 04), to a low of 2.0 mg/kg, dry weight basis. Levels have been below 3.0 consistently since May 05. Equally tellingly, Massachusetts has been monitoring mercury concentrations in the tissue of yellow perch and large mouthed bass in Massachusetts's lakes since 1999. These studies focused on suspected mercury "hot spots" in the northeastern part of the state, where there had been a concentration of higher mercury emissions. Between 1999 and 2004, nine of the lakes sampled for yellow perch were in the northeastern section of Massachusetts and in eight of these lakes, the drop of mercury concentrations in yellow perch averaged 32.4%, and the average for other remaining lakes statewide showed a drop of 15%. Eleven of the lakes sampled for largemouth bass were in the northeast region and mercury levels from seven of these decreased an average of 24%, and the decline over the other remaining lakes statewide was 19%.

## BYPRODUCT GENERATION TRENDS FOR LARGE QUANTITY TOXICS USERS

Byproduct is a measure of the efficiency with which companies use toxic chemicals. The byproduct is the amount of a given chemical that is "wasted" during the production process: that is, it is neither converted into another chemical during production (such as using one chemical to manufacture another compound at a chemical manufacturing plant) or is not incorporated in the product – as copper might be incorporated into a pot, or as a solvent might be incorporated into a can of paint. Some byproduct gets destroyed through pollution control equipment, but that which pollution control technology does not destroy leaves the site as emissions, hazardous waste, or discharges.

Changes in byproduct generation, normalized for changes in production levels, is a good measure of pollution prevention techniques, such as input substitution, improved production processes, or production equipment operation and maintenance.

Between 1990 and 2004 (most recent data), after normalizing for changes in production levels, the Core Group of TURA facilities reduced their byproduct generation by 65%, showing that these facilities used pollution prevention to increase efficiency and reduce waste.

For the 2000 Core Group of facilities for the period between 2000 and 2004 byproduct dropped by 19 %. This decline was 9% when the data was normalized for the decrease in production that occurred over that time period. TURA data. For CY 2005 data will be released in the summer of 2007. The annual TURA data releases can be found at <http://www.mass.gov/dep/toxics/priorities/priorities.htm#tura>

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## Overview of the Waste Site Cleanup Universe

	FY 2003	FY 2004	FY 2005	FY 2006	Program to Date
Number of notifications in BWSC's database <sup>3</sup>	29,132	31,008	32,843	34,256	35,141
Number of unique sites <sup>4</sup>	25,486	27,236	28,992	31,692	32,468
Number of sites in BWSC's database that are closed (e.g., Response Action Outcome, NFA, DPS, daughter RTNs)	17,686 (69.4%)	20,182 (74.1%)	22,498 (77.6%)	25,643 (80.9%)	26,188 (80.7%)
Number of sites closed	1995	2010	1931	1981	26,855
Number of sites in BWSC's database that are open	7800	7054	6494	6049	6019
Number of new notifications <sup>5</sup>	1837	1876	1835	1839	35,141
- number of 2-hour notifications (e.g., sudden releases, spills)	996	1005	968	933	13,643
- number of 72-hour notifications (e.g., LUSTs)	300	326	354	389	6,815
- number of 120-day notifications (e.g., historic releases)	541	545	513	517	7,779
Number of Response Action Outcomes (RAOs) submitted <sup>6</sup> *	1751	1803	1698	1791	23,090
Number of RAOs allowing Unrestricted Site Use <sup>7</sup> *	1628	1688	1599	1675	21,454
Number of RAOs with Activity and Use Limitations (AULs) *	123	115	99	116	1,636

\* The information for FY2003-FY2005 has been revised based upon more current information

<sup>3</sup> These figures represent the number of notifications submitted from the beginning of the Waste Site Cleanup program in 1985. Other notification data below are a subset of that total, and include only notifications received under the revised cleanup program, which began in late 1993.

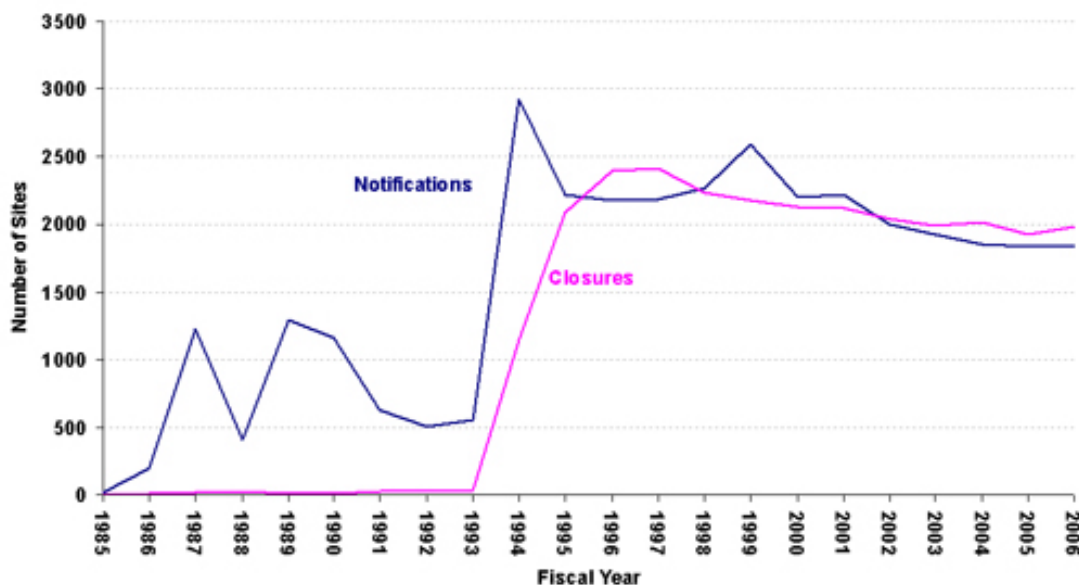
<sup>4</sup> Multiple releases at a location may be combined and assessed under a single Release Notification Number ("RTN"), or incorrect notifications may be retracted.

<sup>5</sup> This is the total number of notifications, some of which may later be combined with other RTNs for the same site. The Program to Date sum includes the pre- and post-1993 notifications. The post-1993 regulations specify the 2-hr, 72-hr and 120-day notification categories.

<sup>6</sup> Program to Date includes only post-1993 closures. Parties have 6 years from the date of release notification to achieve an RAO (absent an extension), so only a portion of releases in a calendar year achieves RAO in the same year.

<sup>7</sup> Program to Date includes only post-1993 closures: Response Action Outcomes.

**Sites Coming In and Closing Out:  
Notifications and Closures  
FY1985-2006**



## Analysis

The number and percentage of sites that are closed continues to increase; since FY2002 the number of sites closed out each year has exceeded the number of new notifications, indicating a steady decline in the number of “active” sites. Ninety-eight percent (98%) of the sites closed since 1994 (under the privatized program) achieve a Permanent Solution, and ninety-three percent (93%) are acceptable for unrestricted use (no institutional control, or “Activity and Use Limitation”).

## Regulations

- January 2006 – Published final Amendments to the Massachusetts Contingency Plan (310 CMR 40.0000, "MCP"), formerly known as Wave 2
- July 2006 – Published final Perchlorate Regulations, including notification criteria and cleanup standards for perchlorate in soil and groundwater

## Other Work Products

- November 2005 – Distributed a new datalayer developed by MassDEP GIS: "MassDEP Oil and/or Hazardous Material Sites with Activity and Use Limitations (AUL)".
- November 2005, and January, March, May, July and September 2006 – Waste Site Cleanup Advisory Committee Meetings

## Objective

- **Maximize Risk Reduction at Waste Sites**
  - Work to ensure that PRPs achieve a compliance rate of at least 75 percent for Immediate Response Action (IRA) submittal requirements, measured one year after discovery of the condition requiring the IRA.

## Targets

- Ensure Implementation of Mandatory Risk Reduction Measures
- Oversee and Perform Emergency Response Activities
- Address Serious Risks Using Public Funds with State Contractors
- Triage
- Provide Direct Oversight of Response Actions at the Most Complex Sites

## 2006 highlights in meeting goal

In FY 2006, DEP was successful in advancing this goal:

- Each regional office undertook a focused effort to review the status of 21E sites within Zone 2s of drinking water supplies
- MassDEP spent nearly \$10.5 million performing response actions at more than 100 sites
- BWSC took nearly 1400 enforcement actions

## Environmental Indicators and other Performance Measures

	FY2003	FY2004	FY 2005	FY 2006	Program to Date <sup>8</sup>
<i>Ensure that PRPs achieve a compliance rate of at least 75 percent for Immediate Response Action (IRA) submittal requirements, measured one year after discovery of the condition requiring the IRA.</i>	N/A	91%	94%	92%	N/A

<sup>8</sup> Program to Date values (through FY06) are provided where available and when applicable.

	<b>FY2003</b>	<b>FY2004</b>	<b>FY 2005</b>	<b>FY 2006</b>	<b>Program to Date<sup>8</sup></b>
Number of RAMs/IRAs conducted	1,956	1,817	1,745	1,761	26,717
Number of sites at which DEP took response actions	102	95	88	111	N/A
Amount DEP spent on response actions	\$6,107,829	\$4,574,284	\$6,756,839	\$10,474,900	N/A
Number of RAOs submitted in the same year as notification received <sup>9</sup>	1285	1149	1005	1027	15,953
Number of LUST cleanups initiated	89	94	94	130	N/A
Number of LUST cleanups completed	225	339	311	204*	N/A
Number of enforcement actions	812	825	1131	1399	7653

\* Number derived using criteria specified by EPA, Lust Program. Total number of 21E closures is slightly higher.

## Analysis

The number of RAOs submitted within the same year of notification has slightly increased over FY05.

The number of sites at which MassDEP took response actions has significantly increased, as has the amount spent on those actions. This is due, at least in part, to improvement in the state's fiscal condition.

The number of enforcement actions rose significantly over the past two years, consistent with MassDEP's increased enforcement efforts.

## Regulations

- January 2006 – Published final Amendments to the Massachusetts Contingency Plan (310 CMR 40.0000, "MCP"), formerly known as Wave 2
- July 2006 – Published final Perchlorate Regulations, including notification criteria and cleanup standards for perchlorate in soil and groundwater

## Other Work Products

- October 2005 - Released a report entitled, "Protecting Our Children and Their Environment: Investigations to Determine Whether Releases of Oil or Hazardous Materials Are Affecting Schools and Environmental Justice Areas in Selected Massachusetts Cities: Chelsea"

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<sup>9</sup> This count is for post-1993 notifications and RAOs. In addition to those sites with RAOs, approximately 5 percent more reach a liability endpoint via DPS and ROS.

- January 2006 - Released a report entitled, “Protecting Our Children and Their Environment: Investigations to Determine Whether Releases of Oil or Hazardous Materials Are Affecting Schools and Environmental Justice Areas in Selected Massachusetts Cities: Worcester”
- June 2006 – Released a letter to fireworks contractors and interested parties explaining potential environmental contamination from the use of perchlorate-containing fireworks and identifying Fireworks Best Environmental Management Practices.

## Objective

- **Increase the rate of privatized clean-ups**

- Work to ensure that Response Action Outcome or Remedy Operation Status statements are submitted within 6 years of release notification for at least 85 percent of sites

### **Targets**

- Enforce Against Parties Not Performing Cleanups
- Streamline and Maintain Compliance Tracking Systems
- Encourage Deadline Compliance by Collecting Annual Compliance Fees

### **2006 highlights in meeting goal**

- 85 percent of RAOs/ROSs statements were submitted within the MCP timeframe, a rate that meets the established goal

## Environmental Indicators and other Performance Measures

	FY 2003 notifications in 1997	FY 2004 notifications in 1998	FY 2005 notifications in 1999	FY 2006 notifications in 2000	Program to Date <sup>10</sup>
<i>Work to ensure that Response Action Outcome or Remedy Operation Status statements are submitted within 6 years of release notification for at least 85 percent of sites</i>	84%	84%	83%	85%	N/A
Number of sites with RAOs by the 6-year deadline *	1668	1708	1795	1598	NA <sup>11</sup>
Percentage of sites with RAOs by the 6-year deadline *	82%	81%	81%	83%	NA
Average duration to reach RAO <sup>12</sup>					

<sup>10</sup> Program to Date values (through FY06) are provided where available and when applicable.

<sup>11</sup> Program to Date data is not calculated because two-thirds of the program years are either pre-1993 or the 6-year deadline has not yet passed.

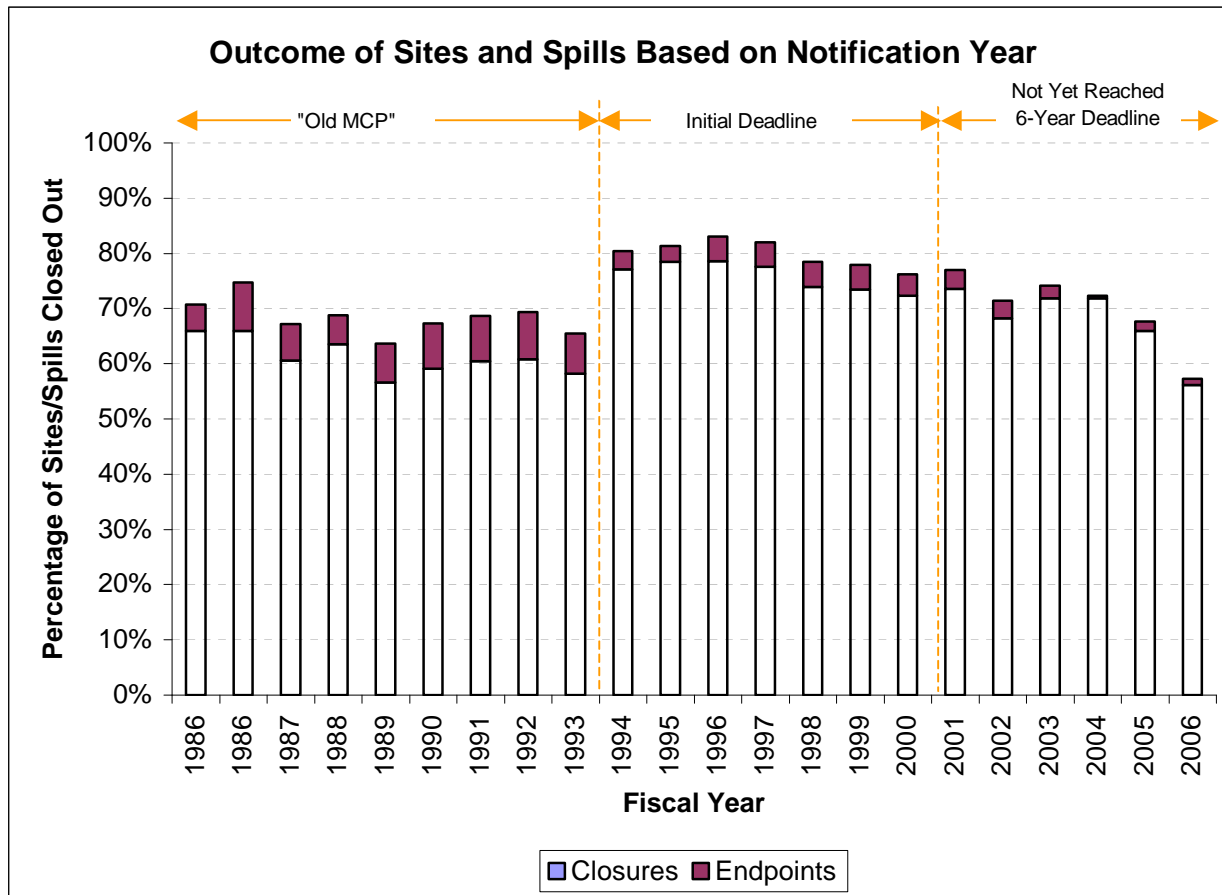
<sup>12</sup> These durations apply only to post-1993 notifications.



	<b>FY 2003</b> notifications in 1997	<b>FY 2004</b> notifications in 1998	<b>FY 2005</b> notifications in 1999	<b>FY 2006</b> notifications in 2000	<b>Program to Date <sup>10</sup></b>
- following 2-hour notifications	264 d	228 d	236 d	224d	235d
- following 72-hour notifications	1.6 yr	1.5 yr	1.7 yr	1.3 yr	1.5 yr
- following 120-day notifications	1.8 yr	1.8 yr	1.8 yr	1.6 yr	1.6 yr
Range of duration to reach RAO (5 <sup>th</sup> to 95 <sup>th</sup> percentile)					
- following 2-hour notifications	15 d – 1.7 yr	0 d – 1.0 yr	4 d – 1.3 yr	26 d – 2.8 yr	NA
- following 72-hour notifications	22 d – 2.3 yr	27 d – 2.7 yr	31 d – 3.6 yr	50 d – 4.6 yr	NA
- following 120-day notifications <sup>13</sup>	0 d – 3.0 yr	0 d – 3.2 yr	0 d – 3.8 yr	0 d – 5.3 yr	NA
Percent reduction in the number of Tier ID sites since FY2000 (sites at which private parties have not conducted response actions).	15%	17%	22%	36%	NA
Number of LSPs registered in e-DEP	N/A	19	34	129	250
Number of external BWSC e- DEP submittals	N/A	76	462	845	2339

\* The information for FY2003-FY2005 has been revised based upon more current information

<sup>13</sup> The 5<sup>th</sup> percentile value, 0 days, indicates that the RAO was submitted on the same day as the notification.



Remedy Operation Status and Downgradient Property Status are identified as Endpoints

## Analysis

The percentage of Tier ID sites has been reduced significantly (36 percent) in 2006 for several reasons. Enforcement and compliance on these sites, a continuing priority, has been successful. Together with a streamlined billing process and a concerted effort to reclassify incorrectly identified Tier ID sites, the percent reduction of these non-complying sites has increased dramatically.

The average time from notification to closeout decreased for all three notification categories. However, the number of sites that closed during 2006 has decreased some, as a result of a relatively low number of notifications received in 2000.

Facilitated by a recently implemented program that allows LSPs/PRPs to access and deliver BWSC forms and submittals electronically, in 2006 the number of e-DEP users and e-submittals increased dramatically as a result of regulatory changes and aggressive outreach and training efforts, including establishing bwsc.eDEP, where potential eDEP users can pose written questions and receive responses within 2 business days.

### **Regulations**

- January 2006 – Published final Amendments to the Massachusetts Contingency Plan (310 CMR 40.0000, "MCP"), formerly known as Wave 2
- July 2006 – Published final Perchlorate Regulations, including notification criteria and cleanup standards for perchlorate in soil and groundwater

### **Other Work Products**

- November 2005 – Distributed a new datalayer developed by MassDEP GIS: "MassDEP Oil and/or Hazardous Material Sites with Activity and Use Limitations (AUL)".
- April 2006 – Revised transmittal forms to reflect submittal requirements in the 2006 Amendments to the MCP: BWSC103 Release Notification and Notification Retraction Form; BWSC104 Response Action Outcome (RAO) Statement; BWSC105 Immediate Response Action Transmittal (IRA) Form; BWSC106 Release Abatement Measure (RAM) Transmittal Form; BWSC108 Comprehensive Response Action Transmittal Form; and BWSC119 Utility-Related Abatement Measure (URAM) Transmittal Form. MassDEP agreed to accept both the old and new versions of these forms until July 3, 2006.
- April 2006 – Remedial Monitoring Report (RMR), required in the 2006 Amendments to the MCP, was made available for submittal online.
- May 2006 – Public involvement forms for notifying property owners within the boundaries of a disposal site were made available.
- June 2006 – Issued BWSC Frequently Asked Questions (FAQs) about electronic submittals.
- June 2006 – Announced the creation of an email box for questions on BWSC eDEP, Transmittal Forms, Permits and the associated attachments.
- June 2006 - New forms BWSC-123 and BWSC-124, notices of remedial actions taken to address Imminent Hazard or Critical Exposure Pathways and of sampling results, were made available.

## Objective

- **Ensure the Quality of Cleanup at Waste Sites**

- Work to ensure that the number of sites receiving comprehensive compliance reviews or other compliance and enforcement follow-up is at least equal to the number of sites recommended for such follow-up as the result of audit.

## Targets

- Maintain Compliance Checks/Inspections for Privatized Cleanups
- Conduct Enforcement to Address Noncompliance with MCP Performance Standards
- Ensure that Policies and Regulations Promote Program Goals
- Conduct Actions to Enhance/Confirm the Quality of Site Investigation Data

## 2006 highlights in meeting goal

- The number of audits, compliance inspections, higher level enforcement actions, and LSPs/environmental professionals that received training dramatically increased

## Environmental Indicators and other Performance Measures

	FY2003	FY2004	FY2005	FY2006	Program to Date <sup>14</sup>
<i>Ensure that the number of sites receiving C&amp;E follow-up is at least equal to the number of sites recommended for such follow-up in the preceding year.</i>	NA	92%	96%	90%	NA
- Level 1 audits	1,987	2,255	2,511	2,474	NA
- Level 2 audits	199	221	311	388	NA
Number of audit and enforcement report findings articles written for publication in the LSPA News	5	4	6	8	NA
Number of audit case study training classes offered to LSPs	6	6	9	0	NA
Number of MassDEP-taught classes offered	0	6	14	14	NA

<sup>14</sup> Program to Date values (through FY06) are provided where available and when applicable.

	<b>FY2003</b>	<b>FY2004</b>	<b>FY2005</b>	<b>FY2006</b>	<b>Program to Date <sup>14</sup></b>
(excluding audit case studies)					
Number of targeted/random comprehensive audits	150 / 46	95 / 36	97/20	142/45	NA
Number of compliance inspections	1,245	1,400	1,286	1,548	NA
Number of higher level enforcement actions	159	217	222	261	NA
Number of LSPs and other environmental professionals attending MassDEP training	230	180	405	1050	NA
Number of meetings with the LSPA Board	6	4	3	2	NA
Number of final regulations, policies, guidance, fact sheets, and Q&As issued or revised	9	36	11	14	NA

## Analysis

MassDEP completed 3,049 audits in 2006, including audits of AULs, which were conducted through a combination of Level 1, Level 2, and Level 3 audits. Approximately 2,474 response action submittals received a Level 1 audit review (a 6 percent increase from last year). Response actions that appear to be inadequate or that document significant violations were flagged for further review or enforcement action. Level 2 audit inspections were conducted at 388 sites to ensure remedial actions are being implemented in accordance with approvals or to verify compliance with an AUL (a 27 percent increase from last year). Level 3 audits were conducted at 187 sites (a 33 percent increase from last year). Although 3,049 audits were performed during this period, only 1,984 counted toward the 20 percent mandate. Despite that fact, in 2006, MassDEP more than met the 20 percent by auditing 36 percent.

Although C&E follow-up efforts in 2006 decreased by 6 percent (to 90 percent), efforts to address the backlog of recommended sites continues to improve. For example, in 2005, 158 sites were recommended for C&E follow-up; 99 were addressed, leaving a backlog of 37 percent. However, in 2006, 101 sites were recommended for C&E follow-up. A total of 142 sites were addressed, leaving only a 29 percent C&E backlog, which is an 8 percent decrease. Improved efforts with both recommendations and C&E follow-up will allow BWSC to prevent growth of the C&E backlog while providing limited staff time each fiscal year to address the backlogged cases.

Higher-level enforcement actions continued to rise, reflecting a MassDEP-wide emphasis on C&E activities.

In the last two years, MassDEP has reinvested resources in training (14 classes each year), resulting in a major increase (1050) in the number of environmental professionals trained (a more than two-fold increase this year over last).

## Regulations

- January 2006 – Published final Amendments to the Massachusetts Contingency Plan (310 CMR 40.0000, "MCP"), formerly known as Wave 2
- July 2006 – Published final Perchlorate Regulations, including notification criteria and cleanup standards for perchlorate in soil and groundwater

**Other Work Products**

- November 2005, and January, March, May, July and September 2006 – Waste Site Cleanup Advisory Committee Meetings
- December 2005 – Released a report on the MassDEP Double-Blind Laboratory Evaluation Program. During 2004 and 2005, MassDEP conducted a large double-blind laboratory evaluation study involving 19 commercial laboratories that provide the majority of analytical support services to parties assessing and cleaning up hazardous waste sites in Massachusetts.
- July 2006 - Announced the availability on the web of a Universal Transverse Mercator Coordinates lookup function. All RTNs must include UTM coordinates.

## Objective

- **Facilitate the Restoration and Redevelopment of Brownfield Properties**
  - Work to assist communities by implementing up to 10 brownfields site assessments/cleanups (subject to funding)
  - Work to ensure that at least 10 percent of municipalities begin compiling brownfields inventories

### Targets

- Coordinate, facilitate, provide technical assistance and on-site coordination
- Implement Brownfields Cooperative Agreement
- The targets described in “**Increase the rate and quality of privatized clean-ups**” above, apply equally to the rate of cleanup and opportunities for redevelopment of brownfields sites

### 2006 highlights in meeting goal

- Provided technical assistance to 100 brownfields project proponents
- Marketed 18 cost recovery/lien sites for redevelopment
- Assisted the Office of the Attorney General in negotiation of 18 Covenant Not to Sue Agreements

## Environmental Indicators and other Performance Measures

	FY 2003	FY 2004	FY 2005	FY 2006
<i>Work to assist communities by implementing up to 10 brownfields site assessments/cleanups (subject to funding)</i>	4	4	5	4
<i>Incorporate into a newly developed database brownfields inventories generated by 20 municipalities</i>	N/A	20	N/A (developing separate inventory of	13 entities (including municipal, regional

	<b>FY 2003</b>	<b>FY 2004</b>	<b>FY 2005</b>	<b>FY 2006</b>
			technical assistance sites)	planning, etc.)
Number of cost recovery/priority lien sites where redevelopment was promoted	N/A	8	15	18
Number of public forums where MassDEP staff was a participant or speaker	N/A	15	30	20
Number of meetings held with regional coordinators	N/A	6	5	2
Number of state/federal partner meetings lead	N/A	12	12	12
Number of sites funded through UBSEA/EJ that were provided with project management	8	2	N/A (project focus changed)	N/A (project focus changed)
Number of communities assisted that received EPA Cleanup Grants	N/A	12	10	9
Number of communities provided with proactive outreach	N/A	20	15	25
Number of communities assisted that received Brownfields Cleanup Revolving Loan Fund money	N/A	7	1	0
Number of brownfields project proponents that received assistance	N/A	55	80	100
Number of EDAs provided with technical assistance	N/A	45	50	60
Number of non-EDAs provided with technical assistance	N/A	10	13	40
Number of projects funded by other federal or state agencies that received technical assistance	N/A	25	20	40
Number of letters provided to public entities requesting assessment and cleanup grant funding	N/A	28	30	65



	<b>FY 2003</b>	<b>FY 2004</b>	<b>FY 2005</b>	<b>FY 2006</b>
Number of Covenant Not to Sue applications DEP staff reviewed for the Attorney General's Office	N/A	21	20	18
Number of referrals accomplished to other state and federal programs	N/A	50	50	45

## Analysis

MassDEP continues to provide significant technical outreach to brownfields project proponents through the Boston and regional offices, as well as through presentations and our website. Strong coordination continues between federal and state brownfields partner agencies. MassDEP provided technical assistance to 100 brownfields project proponents in 2006, marking a clear trend of increasing assistance to those who are undertaking brownfields development.

No major changes occurred in the number of brownfields site assessments/cleanups because funding has remained level over time. The number of communities assisted through EPA cleanup grants and the revolving loan fund are decreasing because EPA determined that fewer projects needed MassDEP oversight. We remain committed to performing oversight on projects when EPA requests assistance.

The Massachusetts/Rhode Island Chapter of the National Brownfields Association continues to increase its membership base, and MassDEP staff serves on the Executive Committee, and chairs the Technical/Training Committee and Communications Committee.

Considerable time and effort was devoted to planning and strategy meetings to help sponsor the Brownfields2006 National Conference held in November 2006.

## Regulations and Other Work Products

None

## Objective

- **Oversee Clean-ups at RCRA Corrective Action Sites**

*Environmental Indicators and other Performance Measures*

Environmental Indicators	FFY 2002	FFY 2005	FFY06
Groundwater releases controlled (RCRA related)*	➤ 4 -- high priority TSD	➤ 0	➤ 0
Activities targeted at controlling or preventing the spread of contamination, preventing human exposure to such releases, and reducing the risk to human exposure and the environment* as measured by:			
% of 26 listed corrective action sites at which assessment is complete (Goal 100% by '08)	Data not available	83%	83%
% of 26 listed corrective action sites at which human health exposure controlled* (Goal 95% by '08)	Data not available	80% (estimated)	Completed 2 EI's for S-K Bridgewater and Salisbury (85%)
% of 26 listed corrective action sites at which groundwater contamination controls in place (Goal 80% by '08)	Data not available	80% estimated	Completed 2 EI's for S-K Bridgewater and Salisbury (70%)
% of 24 listed corrective action sites for which corrective final remedy decision made,	Data not available	0%	0%
% of 26 listed corrective action sites at which corrective action decision implemented *(Goal	Data not available	Data not available	0%

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\* ECOS Core Performance Measure

Environmental Indicators	FFY 2002	FFY 2005	FFY06
20% by '08)			

Outcomes	FFY 2004	FFY 2005	FFY 2006
Activities targeted at controlling or preventing the spread of contamination, preventing human exposure to such releases, and reducing the risk to human exposure and the environment <sup>‡</sup>	➤ 1 - Revised Stabilization Measure reviewed/approved for General Chemical in June 2004.	1-Soil RAM Plan oversight at Handy and Harmon	1- GW stabilization plan at General Chemical Corp.
% of hazardous waste managed at Treatment, Storage, and Disposal Facilities (TSDFs) with approved controls in place*	100%	100%	100%

## **PART III: Environmental Strategies and Actions**

### **Goal 1: Clean Air**

Key Strategies	2005 – 2006 Actions																																
	EPA NE	MA DEP	Milestones																														
<b>Emission Reduction</b> <ul style="list-style-type: none"><li>Ozone</li><li>Fine particulates, air toxics</li><li>CO2</li><li>Other criteria pollutants</li></ul>	<ul style="list-style-type: none"><li>Conduct compliance monitoring activities at power plants</li><li>Employ risk-based targeting of inspections and enforcement</li></ul>	<b>Compliance and Enforcement</b> <ul style="list-style-type: none"><li>Oversee CEM and stack test reporting for NOx Allowance Trading Program (310 CMR 7.27 and 7.28) (Part 75 sources)</li><li>Conduct inspections, review compliance reports, monitoring reports and stack tests and take appropriate follow up enforcement action at air operating permit and other stationary air sources</li><li>Support Regional Implementation of Air Quality National Compliance Monitoring Strategy Including Air Compliance Evaluations: negotiate with EPA on requirements, facilitate statewide consistency by provide guidance/training to regions, track accomplishments <i>Ongoing</i></li><li>Facilitate/monitor State-Wide High Priority Violator Identification (Air pollution sources) and Significant Non Compliance (hazardous waste sources) per EPA grant commitment <i>Ongoing</i></li><li>Routine Regulatory Reporting Implementation for Stage II Facilities (Universe Identification, report receipt, systems management, data entry, report review and enforcement) <i>Ongoing</i></li></ul> <b>Data Systems Development</b> <ul style="list-style-type: none"><li>CDX - AQ information management project, development of electronic Source Registration forms, and development of new Stationary Source Emissions Inventory data</li></ul> <b>Permitting</b> <ul style="list-style-type: none"><li>Support Implementation of Nitrogen Oxides</li></ul>	<ul style="list-style-type: none"><li>Oversee approximately 120 Stack tests <i>(FFY05: 116 FFY06: 132)</i></li><li>Conduct approximately 60 inspections of air operating permit sources and approximately 60 inspections of RES sources and several hundred inspections of small air sources <i>FFY 05:</i><table><tr><td><i>Facility Type</i></td><td><i>#Site Visits</i></td></tr><tr><td></td><td><i>#LLE</i></td></tr><tr><td></td><td><i>#HLE</i></td></tr></table> <table><tr><td><i>-Air Operating</i></td><td><i>67</i></td></tr><tr><td><i>30</i></td><td><i>8</i></td></tr></table> <table><tr><td><i>Permitting</i></td><td><i>73</i></td></tr><tr><td><i>39</i></td><td><i>6</i></td></tr></table> <table><tr><td><i>-Minor &amp; Below</i></td><td><i>370</i></td></tr><tr><td><i>176</i></td><td><i>53</i></td></tr></table> <i>Threshold</i>  <i>FFY06:</i><table><tr><td><i>Facility Type</i></td><td><i>#Site Visits</i></td></tr><tr><td></td><td><i>#LLE</i></td></tr><tr><td></td><td><i>#HLE</i></td></tr></table> <table><tr><td><i>-Air Operating</i></td><td><i>143</i></td></tr><tr><td></td><td><i>19</i></td></tr><tr><td></td><td><i>15</i></td></tr></table></li></ul>	<i>Facility Type</i>	<i>#Site Visits</i>		<i>#LLE</i>		<i>#HLE</i>	<i>-Air Operating</i>	<i>67</i>	<i>30</i>	<i>8</i>	<i>Permitting</i>	<i>73</i>	<i>39</i>	<i>6</i>	<i>-Minor &amp; Below</i>	<i>370</i>	<i>176</i>	<i>53</i>	<i>Facility Type</i>	<i>#Site Visits</i>		<i>#LLE</i>		<i>#HLE</i>	<i>-Air Operating</i>	<i>143</i>		<i>19</i>		<i>15</i>
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Key Strategies	2005 – 2006 Actions																
	EPA NE	MA DEP	Milestones														
		<p>Allowance and Trading Program (310 CMR 7.27 and 7.28): overseeing stack testing, reviewing RATA data certifying accuracy of emissions data, allocating allowances</p> <ul style="list-style-type: none"><li>Implement NOx public benefit set aside requirements by reviewing applications from energy facilities to ensure that they have earned the allowances for which they are applying</li><li>Issue and renew air operating permits and other plan approvals per DEP and EPA regulations</li><li>Air quality modeling for the Facility Based Impact Risk Evaluation at new solid waste management facilities <i>Ongoing as needed</i></li></ul> <p><b>Regulation and Policy Development</b></p> <ul style="list-style-type: none"><li>Support Department of Energy Resources Biomass as a fuel source policy development (Commissioner's Priority)</li><li>Promulgate Opacity Regulations and Limited Plan Approval regulations</li><li>Beyond ERP<ul style="list-style-type: none"><li>Engines and Turbines Project: promulgate regulations and develop presence strategy</li><li>Biotech Project: Air Quality regulations and permit standards</li><li>Stage II Project: implementation -- conduct new inspections, outreach, enforcement strategy to implement new outreach and oversight strategy and coordinate implementation with regional offices (<i>ongoing</i>)</li></ul></li></ul> <p><b>Reporting</b></p> <ul style="list-style-type: none"><li>Manage routine regulatory reporting requirements and associated data systems development &amp; management activities for air (Stationary Source Emissions Inventory System SEISS, and submit compliance and enforcement data to EPA) <i>Ongoing</i></li></ul>	<table><tr><td><del>RES</del> <b>RES</b></td><td></td></tr><tr><td><b>M80</b></td><td>68</td></tr><tr><td><b>12</b></td><td>2</td></tr><tr><td><b>-Minor</b></td><td>276</td></tr><tr><td><b>42</b></td><td>32</td></tr><tr><td><b>-Below Threshold</b></td><td>72</td></tr><tr><td><b>13</b></td><td>9</td></tr></table> <p><i>NOTE: air enforcement is often based on review of reported information as well as inspections</i> <i>Site visits include any kind of inspection</i> <b>HLE = Higher Level Enforcement (orders, penalties, etc.)</b> <b>LLE = Lower Level Enforcement (Notices of Non Compliance)</b></p> <ul style="list-style-type: none"><li>Review over 1500 compliance and stack test reports from air operating permit and RES sources <i>Done</i></li><li>Complete the CDX – AQ and new stationary source emissions inventory system by winter 04-05 <b>CDX node operational January 06 still resolving some bugs. Stationary Source Inventory System operational February 06</b></li><li>Issue the approximately 20 “proposed” and propose and, to the extent feasible, issue, the 10 “draft” active Air Operating</li></ul>	<del>RES</del> <b>RES</b>		<b>M80</b>	68	<b>12</b>	2	<b>-Minor</b>	276	<b>42</b>	32	<b>-Below Threshold</b>	72	<b>13</b>	9
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Key Strategies	2005 – 2006 Actions		
	EPA NE	MA DEP	Milestones
			<p>Permits that remain to be issued. (Manage the 16 Air Operating Permit renewals that come due this year <i>(FFY05: Took action on 20 Air Operating Permits and Renewals, 101 are on hold pending enforcement cases and promulgation of the new opacity standard</i> <i>FFY06: Approved three air operating permits and one was withdrawn. Working on the 11 remaining permits that had been held up by resolution of opacity standard, 2 on hold due to enforcement)</i></p> <ul style="list-style-type: none"> <li>• Issue approximately 150 other air quality plan approvals <i>(FFY05: Took action on 205 FFY06: took action on 167)</i></li> <li>• Complete final engines and turbines rules by Winter 04-05 <i>Regulations promulgated September 05</i></li> <li>• Complete opacity regulations by Fall 04 <i>Public hearing held October 2005, Regulations promulgated Spring 06</i></li> <li>• <i>Assisted in the Department of Energy Resources in the development of guidance on biomass fuel source and developed draft Best Available Control Guidance</i></li> </ul>

Key Strategies	2005 – 2006 Actions		
	EPA NE	MA DEP	Milestones
			<ul style="list-style-type: none"> <li><i>Promulgated Air Quality standards for BioTech in Fall of 2005</i></li> </ul>
<b>Ozone and Particulate Matter Attainment Planning</b> <ul style="list-style-type: none"> <li>Performance standards for fuels, consumer products, stationary sources, vehicles</li> <li>Permits for stationary sources</li> <li>Inspections, emissions testing, audits, and report review for stationary and mobile sources</li> <li>Follow-up enforcement</li> <li>Transportation planning to minimize vehicle miles traveled</li> </ul>	<ul style="list-style-type: none"> <li>Work with MA DEP on development of 2002 ozone inventories, modeling and control measures which will make up the state's ozone attainment demonstration, which will be due in 2007</li> <li>Work with MA DEP to develop PM2.5 emission inventories</li> <li>Conduct outreach on the PM2.5 standard and communicate EPA's PM2.5 implementation rule</li> <li>Work on local particulate matter programs (diesel retrofits, etc.)</li> <li>Continue to work with MA DEP to assure that PM2.5 data is complete and entered into AQS</li> <li>Complete the PM2.5 nonattainment designation by December 2004</li> <li>Support implementation of new NOx and SO2 emission standards for power plants</li> </ul>	<b>Environmental Quality Assessment</b> <ul style="list-style-type: none"> <li>Use results of Mobile 6 Model to develop mobile source budget in conformance with the SIP</li> <li>Run Mobile 6 model to develop mobile source inventory for the State Implementation Plan</li> <li>Maintain MOBILE6 documentation and upgrades <i>Ongoing</i></li> </ul> <b>Program Development and Evaluation</b> <ul style="list-style-type: none"> <li>Develop implementation policies and procedures for implementing the Ozone Transport Commission's multi-pollutant strategy within the region, resulting in further emission reductions from the regional NOx allowance sources; assess impact on MA sources.</li> <li>Coordinate with and provide input to Department of Energy Resources and NE-ISO on energy policy for CO2 and NOx controls <i>Ongoing</i></li> <li>Prepare and submit to EPA a Mid Course Review for Eastern Massachusetts 1-hour Ozone implementation plan per EPA grant commitment</li> <li>Perform ozone screening modeling to evaluate alternative state and/or regional emission reduction strategies to assess likelihood of attaining the 8 hour ozone standard, consistent regional work plan</li> <li>Support the Ozone Transport Commission Modeling Committee in developing SIP quality modeling program</li> <li>Revise the MA 2002 NOx, VOC, and PM2.5 emissions inventories (Base year for SIP purposes) in response to EPA QA; review and update, as</li> </ul>	<ul style="list-style-type: none"> <li>Run Mobile 6 during 2004 – 2005 <i>Model run</i></li> <li>Develop Ozone Transport Commission multi-pollution strategy during 2004 – 2005 <i>Ongoing</i></li> <li><i>Complete the Eastern MA 1-hour ozone mid- course review was submitted 12/23/04 and approved by EPA 9/05.</i></li> <li>Perform Ozone screening modeling during 2005 – 2006 <i>Ongoing</i></li> <li>Support the Ozone Transport Committee's development of a SIP quality modeling program during 2004 –2005 <i>Ongoing</i></li> <li>Develop MA specific growth factors for NOx, VOC and PM 2.5 inventories by the end of 2004 <i>Done</i></li> <li>Develop Architectural Coating, and Consumer Product Regulations in <i>2005 postponed per OTC to FFY06, work ongoing in FFY06</i></li> <li>Develop Gas Can Regulations in 2005 contingent upon California finalizing revisions to its container specifications</li> </ul>

Key Strategies	2005 – 2006 Actions		
	EPA NE	MA DEP	Milestones
		<p>necessary, the MA 2002 NOx, VOC and PM2.5 modeling emissions inventory; document inventory preparation for submission to EPA</p> <ul style="list-style-type: none"> <li>• Develop MA-specific growth factors for the NOx, VOC, and PM2.5 emissions inventory, consistent with regional efforts and for use in 8-hour ozone, Regional Haze, and PM2.5 SIP modeling</li> <li>• Serve as State's Designated Air Pollution Control Official on the Ozone Transport Commission (OTC) <b>Ongoing</b></li> <li>• Coordinate quarterly MA State Implementation Plan (SIP) Steering Committee Meetings) <b>Ongoing</b></li> <li>• Develop comments on EPA's proposed rules and guidance affecting ozone attainment and assure that MA positions are appropriately represented in comments prepared by other regional and national organization in which MA is a member) <b>Ongoing</b></li> <li>• Develop position and provide comments on EPA's PM2.5 standards revision <b>Submit through NESCAUM in April 2006.</b></li> <li>• Review EPA rules regarding PM2.5 attainment in order to ensure that MA interests are adequately protected. <b>Done</b></li> <li>• Develop architectural coatings, consumer product and gas container rules for 8-hr ozone SIP, consistent with MA commitment to Ozone Transport Commission due July 05 <b>Postponed pending OTC review.</b></li> <li>• Participate in the Ozone Transport Commission's Best Available Control Technology/Lowest Achievable Emission Rate policy development initiative (per Commissioner priority) <b>Ongoing</b></li> <li>• Represent the MA Air Program on the Northeast States for Coordinated Air Use Management (NESCAUM) and its "sister" research organization,</li> </ul>	<p><b>postponed per OTC to FFY06, work ongoing in FFY06, however EPA rule published in February 07 may obviate need for state regulation</b></p> <ul style="list-style-type: none"> <li>• Submit a final 2002 SIP inventory for Massachusetts' nonattainment areas by June 1, 2006, and continue to review and update as necessary Massachusetts' 2002 emissions data as reported in EPA's national emissions inventory database. <b>Final version posted on MassDEP website in June 2006, formal submittal to EPA with 8 hour Attainment SIP in June and Fall 2007</b></li> <li>• CAIR: Develop CAIR rules and submit to EPA by September 2006. State may use abbreviated submittal option and/or approach developed and endorsed by OTC. <b>CAIR Rules promulgated May 07</b></li> <li>• Submit draft 8-hr ozone NAAQS modeled control strategies <b>Work underway will be submitted with 8 hour Attainment Demonstration SIP in June and Fall 2007</b></li> <li>• Revise existing MA regulations for solvent cleaning to be consistent with OTC model rules <b>Work underway</b></li> </ul>



Key Strategies	2005 – 2006 Actions		
	EPA NE	MA DEP	Milestones
		NESCCAF (Northeast Center for Clean Air Futures) <i>Ongoing</i>	<ul style="list-style-type: none"> <li>• Submit Draft RACT SIPs for major VOC and NOx sources as outlined in Phase 2 Ozone Rule <i>Work underway will be submitted with 8 hour Attainment Demonstration SIP in June and Fall 2007</i></li> <li>• Submit draft RFP SIPs for each ozone nonattainment area <i>Work underway will be submitted with 8 hour Attainment Demonstration SIP in June and Fall 2007</i></li> <li>• Submit final ozone attainment plans by June 2007 <i>Work underway will be submitted with 8 hour Attainment Demonstration SIP in June and Fall 2007</i></li> <li>• Submit SIP showing that MA does not significantly contribute to nonattainment or maintenance problems for the PM2.5 NAAQS in downwind states. (EPA will prepare technical and policy guidance documents that MA can use to make this demonstration.) <i>Draft completed</i></li> </ul>

Key Strategies	2005 – 2006 Actions		
	EPA NE	MA DEP	Milestones
	<b>Haze</b> <ul style="list-style-type: none"> <li>Participate in the regional planning organization MANE VU charged with the development of the regional haze strategy</li> </ul>	<b>Haze</b> <b>Environmental Quality Assessment</b> <ul style="list-style-type: none"> <li>QA/QC the MA portion of the 2002 regional haze inventory for MANE-VU (a regional air planning authority mandated by the Clean Air Act)</li> <li>Support the development of a regional haze air quality model by MANE-VU</li> </ul> <b>Program Development and Evaluation</b> <ul style="list-style-type: none"> <li>Serve as State's Designated Air Pollution Control Official to the Mid-Atlantic-Northeast Visibility Union (MANE-VU) Ambient Air Quality: Make real time and long term air quality data available to the public <i>Ongoing</i></li> </ul>	<ul style="list-style-type: none"> <li>Work with MANE-VU to develop the haze inventory and haze model during 2004 – 2005: <i>Drafts done in 05, undergoing revisions</i></li> <li>QA/QC MA portion of the 2002 haze inventory in 2004 <i>Done</i></li> </ul>
	<b>Forecasting</b> <ul style="list-style-type: none"> <li>Continue to issue press releases and smog alerts warning of elevated ozone levels and elevated levels of fine particles when appropriate (the smog alert service currently notifies 2,000 interested organizations and individuals of predicted poor air quality via fax or e-mail)</li> <li>Continue to assist the NE states with their ozone and fine particle forecasting efforts and to produce the daily ozone forecast map for the NESCAUM states. Outreach to the media will be done to promote the use of air quality forecasts in newspapers and on television.</li> </ul>	<b>Forecasting</b> <b>Environmental Quality Assessment</b> <ul style="list-style-type: none"> <li>Calculate and post on the MA website the daily Air Quality Index for ozone (seasonal May-Sept.) and for PM 2.5 (annual) <i>Ongoing</i> Public Information</li> <li>Communicate daily air quality forecast to public through media and website <i>Ongoing</i></li> <li>Provide EPA air quality data and daily pollutant predictions for the Air NOW website and maps of ambient ozone and PM2.5 air concentrations</li> <li>Prepare and publish the Annual Air Quality Report and post it on the DEP website <i>Ongoing</i></li> </ul>	

Key Strategies	2005 – 2006 Actions		
	EPA NE	MA DEP	Milestones
	<ul style="list-style-type: none"> <li>Conduct a workshop on air quality outreach and forecasting for the New England states</li> </ul>		
Inspection & Maintenance Program	<ul style="list-style-type: none"> <li>Continue to work with the DEP assist with implementation of the I/M program</li> </ul>	<p>Compliance and Enforcement</p> <ul style="list-style-type: none"> <li>Oversee equipment audits by contractors, conduct equipment audits auditing each station at least once during the year</li> <li>Manage emissions waiver program: work jointly with the RMV to issue passing waivers to motorists who have reached the expense threshold</li> <li>Oversee the I &amp; M Network Contractor</li> <li>Support Registry of Motor Vehicles field staff who enforce the testing requirements Ongoing</li> </ul> <p>Permitting</p> <ul style="list-style-type: none"> <li>Oversee initial certification and biennial recertification of inspectors by contractor</li> </ul> <p>Grants/Loans/Technical Assistance/Outreach</p> <ul style="list-style-type: none"> <li>Respond to and resolve consumer and station complaints and questions Ongoing</li> <li>Communication for Enhanced Inspection and Maintenance Program Ongoing</li> <li>Oversee initial and refresher training for inspectors Ongoing</li> <li>Publish quarterly repair technician newsletter Ongoing</li> </ul> <p>Program Development and Evaluation</p> <ul style="list-style-type: none"> <li>Improve inspection and maintenance testing equipment and software</li> <li>Evaluate need for, and begin, if necessary, RFR for the next I&amp;M program Ongoing</li> <li>Equipment effectiveness evaluation: Start up the IM240 Test laboratory</li> <li>Maintain Advisory Committee and subcommittees</li> </ul>	<ul style="list-style-type: none"> <li>Oversee 1,600 equipment audits by contractors <b>Done</b></li> <li>Conduct 150 equipment audits <b>Done</b></li> <li>Oversee 1,700 covert vehicle audits by contractor <b>Done</b></li> <li>Oversee 750 covert visual audit by contractor <b>Done</b></li> <li>Assist the Registry with the issuance of waivers to qualifying vehicles and denial of waivers to non-qualifying vehicles (estimate 350 waivers may be needed) <b>Done</b></li> <li>Oversee initial certification and biennial recertification of inspectors by contractor (estimate 1,500 inspectors newly certified annually, and 5,000 inspectors recertified biennially) <b>Done</b></li> <li>Start up IM240 lab by July 1, 2005 <b>On-hold</b></li> <li>Conduct semi-annual Advisory Committee meetings <b>Done</b></li> <li>Oversee the updating and publishing of the Registered Repair Facility report card quarterly by contractor <b>Done</b></li> <li>Oversee the quarterly publication of the program newsletter by</li> </ul>

Key Strategies	2005 – 2006 Actions		
	EPA NE	MA DEP	Milestones
		Public Information <ul style="list-style-type: none"> <li>• Provide Information to the general public on the I&amp;M program Ongoing</li> <li>• Update and Publish Registered Repairer repair report card Ongoing</li> </ul> <b>Reports to EPA</b> <ul style="list-style-type: none"> <li>• Prepare and submit annual report to EPA mandated by federal I&amp;M regulations (Biennial report not due until 2006) Annual reports submitted</li> </ul>	contractor <b>Done</b> <ul style="list-style-type: none"> <li>• Oversee the replacement and upgrade of workstations by contractor by February 26, 2005 <b>Done</b></li> <li>• Evaluate compliance of contractor with contract performance standards monthly <b>Done</b></li> <li>• Prepare annual Interagency Service Agreement for execution with the Registry for IM program funding at DEP by IM Trust <b>Done</b></li> <li>• Complete and submit annual I/M reports to EPA. <b>Done</b></li> </ul>
<b>Mobile Source Air Pollution Control</b>  Transportation Control Measures  LEV		<b>Compliance and Enforcement</b> <ul style="list-style-type: none"> <li>• LEV Compliance Assurance:               <ul style="list-style-type: none"> <li>○ Automobile purchaser assistance</li> <li>○ Dealer oversight and assistance</li> <li>○ Train, support RMV Registrations staff</li> </ul> </li> <li>• Assure LEV and ZEV Compliance by reviewing automobile manufacturer data on fleet mix and advanced technology vehicles placed in MA</li> <li>• Implement flexibility within the Zero Emission Vehicle mandate with CA and other states to maximize the placement of advanced technology vehicles in MA by reviewing auto manufacturer's proposed plans for compliance</li> <li>• Reporting: Rideshare compliance and enforcement</li> <li>• State (Massport) and Municipal Parking Freezes: Parking Freeze compliance assurance</li> <li>• Big Dig Mitigation:</li> </ul>	<ul style="list-style-type: none"> <li>• Respond to routine consumer inquiries to determine if vehicles can be registered in MA <b>Ongoing</b></li> <li>• Review fleet mix data from 25 manufacturers by May 05 2005 <b>Done</b></li> <li>• Review ZEV compliance plans from approx. six manufacturers by Sept 05 2005 <b>LEV Reg. revised late 2005 and ACPs submitted to DEP in January 2006</b></li> <li>• Provide updates to RMV on changes to LEV regulations to ensure only CA certified vehicles are registered in MA <b>Ongoing</b></li> <li>• Review rideshare reports from</li> </ul>

Key Strategies	2005 – 2006 Actions		
	EPA NE	MA DEP	Milestones
		<ul style="list-style-type: none"> <li>○ Review transportation agencies' (EOT/Mass Highway, MBTA, Massachusetts Turnpike Authority) projects for compliance with regulations and enforcement actions</li> <li>○ Review Mass Highway Department's study of the air quality benefits of the High Occupancy Vehicle Lane to ensure air quality benefits are met.</li> <li>○ Implement vent certification process under DEP/EOTC Vent cert regulation. <i>Ongoing</i></li> <li>• Transportation Conformity: Review and concur with metropolitan planning organizations annual transportation plans and/or programs. <i>Ongoing</i></li> </ul> <p><b>Permitting</b></p> <ul style="list-style-type: none"> <li>• MEPA Reviews of transportation related impacts</li> </ul> <p><b>Regulation and Policy Development</b></p> <ul style="list-style-type: none"> <li>• Develop CA Greenhouse Gas Rule for cars/trucks, (unclear if we're doing this – omit), ZEV compliance flexibility</li> <li>• Revise Tunnel Vent Certification Regulations (310 CMR 7.38) to update monitoring protocols</li> <li>• Big Dig Mitigation: Conduct public process to review, and as necessary revise outstanding transportation agency commitments</li> </ul>	<p>approx. 300 facilities, and take appropriate follow up enforcement <i>Done</i></p> <ul style="list-style-type: none"> <li>• Ensure parking freeze compliance in Boston, Cambridge, and Logan Airport <i>Done</i></li> <li>• Review of the HOV lane air quality benefits completed by within 3 months after submission by MHD 2005 <i>Quarterly reports submitted by MHD and reviewed</i></li> <li>• Review and approval of 13 regional planning agencies' annual transportation control plans and/or programs <i>Done</i></li> <li>• Complete MEPA reviews for major projects as necessary (note that we have mostly disinvested in the activity) <i>Done</i></li> <li>• Adopt CA green house gas rule by end of 2005 – <i>reg. effective on 12/30/05</i></li> <li>• Develop ZEV compliance flexibility by June 05 <i>Reg. final 12/05</i></li> <li>• Develop Tunnel Vent Cert. Regulations Revisions (310 CMR 7.38) by June 05 <i>Reg final 12/05</i></li> <li>• Decision on Big Dig mitigation changes by Spring 05 <i>Draft proposed Fall 2005, Final adopted Fall 2006</i></li> <li>• Update current transportation and</li> </ul>

Key Strategies	2005 – 2006 Actions		
	EPA NE	MA DEP	Milestones
			general conformity rules to be consistent with current EPA rules <i>Work on hold pending completion of other, higher priority work</i>
Green House Gases	<ul style="list-style-type: none"> <li>• Provide funding support for states and NEG/ECP climate change action plan</li> <li>• Oversee \$65,000 grant to New England Governors Conference to assist in administration of Climate Change Action Plan</li> <li>• Oversee \$25,000 grant to Institute for Sustainable Energy for assistance in training state officials on use of EPA's building benchmarking tool for energy performance</li> <li>• Assist Massachusetts communities (including Amherst, Brookline, Cambridge, Lowell, Somerville) on the benchmarking of energy performance of school and municipal buildings</li> <li>• Promote Energy Challenge to Performance Track facilities in MA (seek commitment to</li> </ul>	<b>Program Development and Evaluation</b> <ul style="list-style-type: none"> <li>• Develop Greenhouse Gas strategy under the direction of the Commissioner's Office and Office of Commonwealth Development, and in cooperation with interstate air pollution control agencies</li> <li>• Participate in the development of Regional Green House Gas Registry through NESCAUM, including stationary CO2 source inventory work</li> <li>• Decide whether and if so how to implement the CO2 control provisions in 310 CMR 7.29</li> <li>• Participate in the Regional Greenhouse Gas Initiative by leading the developing a model rule that would establish a regional Greenhouse Gas cap and allowance program for power plants</li> </ul>	<ul style="list-style-type: none"> <li>• Decision on implementing CO2 controls by Fall 2004 <b><i>Draft Regulations proposed Fall 2005, Regulations final Fall 06</i></b></li> <li>• Develop model rule for regional Greenhouse Gas cap and allowance program for power plants by April 2005 <b><i>Model Rule adopted by seven states December 2005 (MA did not sign)</i></b></li> </ul>

Key Strategies	2005 – 2006 Actions		
	EPA NE	MA DEP	Milestones
	<p>reduce greenhouse gas emissions)</p> <ul style="list-style-type: none"> <li>• Provide \$30,000 grant to Massachusetts Climate Network of municipalities to promote greenhouse gas reductions</li> </ul>		
<p><b>Diesel</b></p> <p>DEP, EPA and local Boards of Health employ a mix of approaches to controlling diesel pollution including regulatory standards, control equipment testing, fuel and control equipment standards, public information, enforcement of idling regulations and incentives.</p>	<ul style="list-style-type: none"> <li>• Oversee \$483,000 grant to the City of Medford to retrofit 54 school buses with diesel particulate matter filters &amp; fuel the fleet of 65 buses with ultra low sulfur diesel fuel (ULSF), for use in Medford and 13 neighboring communities</li> <li>• Oversee SEP for diesel engine retrofits on school buses in Boston</li> <li>• Identify and negotiate new SEPs for retrofits/cleaner fuels for diesel engines</li> <li>• Oversee SEP for lower sulfur diesel and retrofit MBTA commuter locomotive engines</li> <li>• Manage \$64,000 to the City of Boston to work with the touring trolley companies to retrofit vehicles with oxidation catalysts and encourage use of ULSF</li> <li>• Facilitate a pilot project in</li> </ul>	<ul style="list-style-type: none"> <li>• Promulgate and Implement new performance standards for small diesel engines at stationary sources (“distributed generation”)</li> <li>• Continued implementation of heavy duty vehicle emissions I&amp;M program</li> <li>• Continued implementation of Best Management Practice (BMPs) and require retrofits for landfills, wastewater treatment plants funded by the state revolving loan fund, and construction equipment used on the Central Artery/Third Harbor Tunnel</li> <li>• Continued effort to prevent truck idling at truck stops and other locations</li> <li>• Continued work with individual school bus companies, and school bus company trade associations to implement anti-idling programs and conduct Inspections and follow up enforcement actions</li> <li>• Beyond ERP: HIHV School bus Idling: inspect and take appropriate enforcement actions against school buses that violate the anti-idling rules</li> <li>• Develop an action plan for further controlling diesel emissions. Plan should be complete during winter of 2004. Strategies under consideration include expanded anti-idling programs, expanded diesel powered vehicle tailpipe I&amp;M program and program enforcement, promoting engine retrofits, promoting</li> </ul>	<ul style="list-style-type: none"> <li>• Distributed Generation rule <b>Done</b></li> <li>• I/M heavy duty inspections <b>Ongoing</b></li> <li>• BMPs and CA/T retrofits <b>Ongoing</b></li> <li>• Truck Idling <b>Ongoing</b></li> <li>• Idling <b>FFY05 – 3 rounds of inspections for school bus idling performed at 91 schools; 16 enforcement actions issued; over 2000 school bus drivers trained to date FFY06 36 inspections of truck idling 2 higher level and 13 lower level enforcement actions issued</b></li> <li>• Diesel Plan <b>Ongoing</b></li> </ul>

Key Strategies	2005 – 2006 Actions		
	EPA NE	MA DEP	Milestones
	<p>Boston to reduce air pollution and air toxics from transportation sources thru participation in EPA's voluntary transportation programs, i.e.; Voluntary Diesel Retrofit Program, Anti-Idling Initiatives, Best Workplaces for Commuters and SmartWay Transport. Pilot will launch with a workshop for Boston area businesses this winter.</p> <ul style="list-style-type: none"> <li>• Work with Massport to reduce diesel emissions at Conley Terminal thru strategies such as emulsified diesel fuel, ULSF, diesel retrofits, and anti-idling outreach and enforcement</li> <li>• Recognize employers that encourage their employees to commute to work in ways that reduce pollution &amp; traffic congestion by adding names of these employers to the New England list of the Best Workplaces for Commuters employers.</li> <li>• Provide and manage \$130,000 New England Asthma Regional Coordinating Council (ACR) grants for asthma reduction plan including school bus</li> </ul>	<p>the use of ultra low sulfur fuel (ULSF) and tax credits for retrofits and early use of ULSF.</p>	



Key Strategies	2005 – 2006 Actions		
	EPA NE	MA DEP	Milestones
	diesel retrofit pilots and anti-idling efforts in high risk communities with high risk of asthma		
<p><b>Toxics</b> NOTE: Other Multi Media Work, such as “Toxics Use Reduction” &amp; “Beyond ERP” that apply equally to the Air &amp; Industrial Wastewater Goals can be found under Goal 3: Manage Waste &amp; Clean Up Waste Sites</p> <p><b>Lead:</b> EPA goal to eliminate medically confirmed blood lead levels greater than 10jug/dL among children under age 6 by 2010</p> <p><b>Mercury:</b> EPA Regional Mercury Model provides an integrated approach to assessing the effects of mercury from the atmosphere, point and non-point sources on watersheds and ultimately, fish populations</p> <p><b>Asbestos Enforcement</b></p>	<p><b>General Toxics Work</b></p> <ul style="list-style-type: none"> <li>Implement the PSD program, in close coordination with MA DEP</li> <li>Review and provide comments on major non-attainment NSR permits, Title 5 operating permits, and permits to restrict emissions</li> <li>Review and take regulatory action on changes submitted on MA plan approval requirements at 310 CMR 7.02</li> <li>Notify MA facilities subject to commercial, industrial, solid waste incinerator (CISWI) regs, and small municipal waste combustor (MWC) regs</li> <li>Work with NESCAUM workshop for states on revisions to the federal NSR program</li> <li>Work with NESCAUM’s Air Quality and Public Health Committee on presentations and guidance for states on air toxics regs, community air toxics projects, air toxics risk, and the results of the 1999</li> </ul>	<p><b>General Toxics Work</b></p> <ul style="list-style-type: none"> <li>Reduction in daily toxic emissions resulting from the Enhanced Vehicle Maintenance Program <i>Ongoing</i></li> <li>Reduction in daily toxic emissions resulting from the Stage II Vapor Recovery Program <i>Ongoing</i></li> <li>State progress in collecting and compiling ambient and emission source data for toxics to better understand the nature and extent of the air toxics problem (Monitoring data results) <i>Ongoing</i></li> </ul> <p><b>Environmental Quality Assessment</b></p> <ul style="list-style-type: none"> <li>Review and comment on the 1999 National Air Toxics Assessment, specifically targeting MA information <i>Ongoing</i></li> <li>Enter MA-specific mercury emissions data into the National Emissions Inventory <i>Ongoing</i></li> <li>Update air toxics information on DEP's website <i>Ongoing</i></li> </ul> <p><b>Mercury</b></p> <ul style="list-style-type: none"> <li>Achieve at least 85% reduction in mercury emissions from power plants <i>Ongoing</i></li> <li>Mercury emissions from municipal waste combustors will decrease further due to pollution prevention, implementation of material separation plans, and new controls to be installed in 2003 and 2004 at two Municipal waste combustors <i>Ongoing</i></li> <li>Reductions in power plant mercury emissions are expected upon installation of new SO<sub>2</sub> and NO<sub>x</sub> controls at large power plants and upon promulgation and implementation of proposed power plant mercury regulations <i>Ongoing</i></li> </ul>	

Key Strategies	2005 – 2006 Actions		
	EPA NE	MA DEP	Milestones
<p><b>Initiative:</b> MA DEP's goal is to enhance and support enforcement of asbestos regulations and protect public health through:</p> <ul style="list-style-type: none"> <li>• Increase targeted inspections</li> <li>• Publicize inspection efforts</li> <li>• Publicize enforcement cases</li> </ul> <p><b>Dioxin:</b> Two EPA projects are planned.</p> <ul style="list-style-type: none"> <li>• Barrel Burning Project:</li> <li>• Source Inventories</li> </ul>	<p>National Air Toxics Assessment (NATA) due in 2004</p> <ul style="list-style-type: none"> <li>• Continue to send DEP weekly/monthly updates of new source performance standards (NSPS) and maximum available control technology (MACT) standards and host monthly air toxics conference calls</li> <li>• Semi-annually, send DEP options on accepting delegation of NSPS and MACT standards and delegate accordingly</li> <li>• Provide technical assistance and oversight for dispersion modeling for NSR/PSD sources</li> <li>• Provide assistance on MACT, NSR or NSPS applicability determinations</li> <li>• Oversee \$60,000 grant to Lawrence/ Merrimack Valley air toxics project</li> <li>• Oversee \$50,000 grant to North Shore HealthLink air toxics project</li> <li>• Work with states and regulated community in implementing Maximum Achievable Control Technology and New Source Performance Standards</li> </ul>	<p><b>Asbestos Compliance and Enforcement</b></p> <ul style="list-style-type: none"> <li>• Asbestos demolition/renovation compliance rate target to be determined through Beyond ERP</li> <li>• Targeted Inspections: DEP will perform asbestos inspections, targeting inspections based on the potential risk of exposure. <i><b>FFY05 Did 529 inspections issued 28 higher level enforcement actions</b></i> <i><b>FFY06 Did 680 inspections issued 27 higher level enforcement actions and 2 lower level enforcement actions</b></i></li> <li>• Off-Hour Inspections: To increase ability to discover violations, enforcement staff will perform inspections during weekends and evenings. <i><b>Ongoing</b></i></li> </ul> <p><b>Program Development and Evaluation</b></p> <ul style="list-style-type: none"> <li>• Develop the following regulations and guidance for the asbestos program: Asbestos in Soil Regulations and Guidance, Routine Building Maintenance Asbestos Guidance, Revised Asbestos Base Penalty Amounts, Asbestos Cement Shingle Guidance, Asbestos Inspection Protocol for Solid Waste Handling Facilities <i><b>Ongoing</b></i></li> <li>• Beyond ERP: Asbestos at Construction and Demolition Debris Processors Project: develop policies, revise permits as needed <i><b>Ongoing</b></i></li> <li>• Beyond ERP: Asbestos Targeted Group and HHV: <ul style="list-style-type: none"> <li>○ Asbestos in soils regulation and policy development</li> <li>○ Develop Routine Building Maintenance Asbestos Guidance</li> <li>○ Revise Asbestos Base Penalty Amounts</li> <li>○ Develop Asbestos Cement Shingle Guidance</li> <li>○ Asbestos Inspection Protocol for Solid Waste</li> </ul> </li> </ul>	

Key Strategies	2005 – 2006 Actions		
	EPA NE	MA DEP	Milestones
	<ul style="list-style-type: none"> <li>Work with states to approve alternative state air toxics requirements which achieve superior environmental results as compared to federal MACT standards</li> </ul>	Handling Facilities <i>Ongoing</i> <b>Reporting</b> <ul style="list-style-type: none"> <li>Reporting: Asbestos Notifications receipt and management  <i>FFY05: Managed 15,531 Notification</i>  <i>FFY06: Managed 18,500 Notifications</i></li> </ul>	
<b>Maintain the Ambient Air Monitoring Network</b>  DEP meets the data capture standards for all parameters except for PM. DEP is working on a plan in consultation with EPA to improve PM data capture. Average data capture for PM2.5 rose from 70% to 80% between 2001 and 2002. DEP will continue to work to improve data.	<ul style="list-style-type: none"> <li>Operate the Lowell carbon monoxide (CO) monitor (until EPA's coop student leaves in the spring of '04, when EPA will then revisit ability to continue support)</li> <li>Conduct performance audits of Bio Watch monitors, ozone and other pollutant monitors</li> <li>Conduct volatile organic compound (VOC) round robin for photochemical assessment monitoring stations (PAMS)</li> <li>Continue to perform instrument performance audits at NAMS, SLAMS, and PAMS monitoring sites.</li> <li>Review proposed changes to the air quality monitoring network and evaluate all new monitoring sites for proper siting criteria</li> </ul>	<ul style="list-style-type: none"> <li>Air quality monitoring network: upgrade per EPA grant commitment</li> <li>Analyze air quality monitoring data <i>Ongoing</i></li> <li>Perform routine quality assurance/quality control on the ambient air quality network and data, in compliance with EPA-approved QAPPS <i>Ongoing</i></li> <li>Update PM2.5 QAPP, reflecting new equipment and EPA comments</li> <li>Submit electronically to EPA ambient monitoring data on criteria pollutants within 90 days of the close of a calendar quarter, ambient monitoring PAMS data within 6 months of the close of each month in the ozone season, and air toxics data within six month <i>Ongoing</i></li> <li>Run and maintain the air monitoring network for criteria air pollutants (PM2.5, CO, NO2, SO2, PM10, Pb, Ozone (including BAM, speciation, and IMPROVE monitors) and for meteorological parameters, assuring a data collection of 90% for ozone and 75% for all <i>Ongoing</i></li> <li>Run and maintain ambient monitoring network for non-criteria pollutants (PAMS, Toxics, PM Speciation) consistent with EPA requirements <i>Ongoing</i></li> </ul>	<ul style="list-style-type: none"> <li>Submit draft PM2.5 QAPP Update, in June '05. <i>Draft submitted to EPA</i></li> <li>Complete the installation of the new PM2.5 monitors by winter 05 <i>done</i></li> <li>Continue implementation of the corrective actions from the EPA's technical systems audit (TSA) of DEP's program. <i>TSA performed in July 06 preliminary feed back was positive</i></li> </ul>
<b>Acid Rain</b>		<b>Program Development and Evaluation</b> <ul style="list-style-type: none"> <li>Coordinate with New England Governor's Eastern Canadian Premiers Acid Rain work: forest mapping, acid deposition, and water quality monitoring</li> </ul>	

Key Strategies	2005 – 2006 Actions		
	EPA NE	MA DEP	Milestones
		<i>Ongoing</i>	
<b>Compliance and Enforcement</b>	<ul style="list-style-type: none"> <li>• Prepare statewide GIS map of air toxics sources, major sources and potential EJ areas/ provide to MA for use in targeting and strategy development</li> <li>• Cooperate on development of MA proposal to credit work performed on MA dry cleaner ERP program</li> <li>• Employ risk-based targeting of inspections and enforcement; employ additional place-based targeting to address EJ issues, including continuation of cooperative efforts in Lower Mystic River watershed</li> <li>• Continue work with MA DEP to improve enforcement action reporting in EPA databases &amp; improve knowledge of facility universe</li> </ul>	<ul style="list-style-type: none"> <li>• Complete proposal to credit work performed on Massachusetts dry cleaner ERP program <i>Ongoing</i></li> <li>• Consider additional place-based targeting to address EJ issues, including continuation of cooperative efforts in Lower Mystic River watershed <i>Ongoing</i></li> <li>• Improve reporting of enforcement action in EPA databases and improve knowledge of facility universe <i>Ongoing</i></li> </ul>	
<b>Other Multi-Media Work (Toxics Use Reduction) &amp; work done as part of the Beyond ERP initiative that applies equally to the Air and Industrial Wastewater can be found in the Waste Strategies Section of</b>			

<b>Key Strategies</b>	<b>2005 – 2006 Actions</b>		
	<b>EPA NE</b>	<b>MA DEP</b>	<b>Milestones</b>
<b>this PPA</b>			

## **Goal 2: Clean and Safe Water**

### **Drinking Water/Surface and Ground Water/Intact and Functioning Wetlands**

#### **National Status and EPA Strategies**

**Over the 30 years since the enactment of the Clean Water and Safe Drinking Water Acts, government, citizens, and the private sector have worked together to make dramatic progress in improving the quality of surface waters and drinking water. Today, drinking water is treated to be safe at the faucet end and protected at the source. Today, the number of polluted waters has been dramatically reduced, and many clean waters are even healthier. A massive investment of federal, state, and local funds has resulted in a new generation of sewage treatment facilities able to provide “secondary” treatment or better. More than 50 categories of industry now comply with nationally consistent discharge regulations. In addition, sustained efforts to implement “best management practices” have helped reduce runoff of pollutants from diffuse, or “nonpoint,” sources. But despite these outstanding improvements, population growth continues to generate higher levels of water pollution and places greater demand on drinking-water systems. To further our progress toward clean waters and safer drinking water, we must both maintain our commitment to the core measures we have already established and look for new ways to improve water quality and protect human health.**

#### **Massachusetts 2005-2006 PPA Water Program**

As part of this PPA, in 2005, DEP piloted an innovative approach to the development of environmental goals and the work plans needed to achieve those goals and disseminate them via the Internet. The pilot has been completed successfully and then 2nd year of this innovative program will be to institutionalize this approach for FY07. The electronic work plans for DEP's Water Programs can be found at: <http://www.mass.gov/dep/water/priorities/05home.htm> and is incorporated into this PPA by reference.

#### **Water Program Milestone Deliverables**

In addition, there are milestone deliverables that DEP anticipates meeting during the 2005-2006 PPA. A listing of these deliverables can be found at : <http://www.mass.gov/dep/water/priorities/05home.htm>

## **GOAL 3 LAND PRESERVATION AND RESTORATION**

Key Strategies	2005 -2006 Actions		
	EPA NEW ENGLAND	MADEP	MILESTONES
<b>REDUCE WASTE</b>			•
<b>Solid Waste Master Plan Development</b>		<b>Program Development and Evaluation</b> <ul style="list-style-type: none"> <li>• Solid Waste Master Plan update and revision/mid course adjustment</li> <li>• Work with the external Solid Waste Advisory Committee and Subcommittees Analyzing solid waste streams to help target assistance programs: organics mapping <i>Ongoing</i></li> <li>• Complete Annual Solid Waste Status Report for 2003 and Update Capacity Projections</li> </ul> <b>Reporting</b> <ul style="list-style-type: none"> <li>• Collect, manage, and analyze solid waste Municipal Data Sheets, Processor Surveys, Compost Site Reports</li> <li>• Manage routine regulatory reporting requirements and associated data development &amp; management activities for the Solid Waste Management Facility Annual Reports</li> </ul>	<ul style="list-style-type: none"> <li>• Issue Draft Revised Master Plan by April 2005 <i>Draft issued Fall 05</i></li> <li>• Issue Final Revised Master Plan by June 2005 <i>Issued Spring 06</i></li> <li>• Complete the Annual Solid Waste Status Report for 2003 by July 2005 <i>Done</i></li> <li>• Manage a total of 650 solid waste reports <i>Done</i></li> </ul>
<b>Reduce Solid Waste and Promote Recycling</b>  <b>Solid Waste Master Plan Implementation</b>	<ul style="list-style-type: none"> <li>• Implement targeted reduction /efficiency strategies on: Electronics waste, Food Waste, Green Buildings, including EPA Facilities</li> <li>• Implement targeted sector strategies on: Health Care/Hospitals, Schools, Colleges and Universities</li> <li>• Provide grant to MA DEP focused on Recycling Food Waste</li> <li>• Provide grant to MA WasteCap focused on Marine Shrinkwrap</li> <li>• Provide assistance to MA DEP for Food Waste Summit</li> <li>• Support electronic</li> </ul>	<b>Solid Waste Diversion: Schools</b> Grants/Loans/Technical Assistance/Outreach <ul style="list-style-type: none"> <li>• School Recycling Programs/Green Team</li> </ul> <b>Solid Waste Diversion: Residential</b> Grants/Loans/Technical Assistance/Outreach <ul style="list-style-type: none"> <li>• Residential Food and Yard Waste: Home Composting Grants and outreach</li> <li>• Residential Food and Yard Waste: Support Pay As You Throw programs</li> <li>• Residential Paper: Award New Springfield MRF contract</li> <li>• Residential Paper: Equipment and Technical Assistance – support municipal recycling programs by maintaining tools and assistance</li> <li>• Residential Paper: Increase Pay As You Throw programs</li> <li>• Residential Paper: Recycling Education and Outreach – Leverage extensive outreach with limited resources</li> </ul>	<ul style="list-style-type: none"> <li>• .Implement The Green Team at 151 schools representing nearly 30,000 students. Start 4 new school recycling programs and expand 8 others. Provide equipment where necessary. <i>Done</i></li> <li>• Award 20+ communities with home composting bins and/or food waste buckets. Hold 8 compost workshops <i>Done</i></li> <li>• Provide 3 PAYT grants, provide 15+ communities with PAYT technical assistance, hold 4 PAYT events, and meet with 30+ communities individually on PAYT. <i>Done</i></li> <li>• Negotiate and award the Springfield MRF contract by Dec. 2004. <i>Done</i></li> <li>• Equipment and Technical Assistance Grants – Award over 20 TA projects, Provide equipment of 25+</li> </ul>



Key Strategies	2005 -2006 Actions		
	EPA NEW ENGLAND	MADEP	MILESTONES
	recycling coordination through Northeast Recycling Council (NERC)		communities. <i>Done</i>

Key Strategies	2005 -2006 Actions		
	EPA NEW ENGLAND	MADEP	MILESTONES
		<b>Solid Waste Diversion: Commercial Grants/Loans/Technical Assistance/Outreach</b> <ul style="list-style-type: none"> <li>Commercial Organics: Expand Supermarket Composting Project</li> <li>Manage EPA Organics Grant for supermarket composting</li> <li>Commercial Organics: Hauler Outreach and Incentives</li> <li>Commercial Organics: Organics Summit</li> <li>Commercial Organics: Policy/program development <b>Ongoing</b></li> <li>Commercial Organics: RIRC grants and RLF loans</li> <li>Commercial Organics: Work with farmers</li> <li>Commercial Paper and Cardboard: Support municipal business collection programs</li> <li>Commercial Paper and Cardboard: Work with hospitals Program Development and Evaluation</li> <li>Commercial Paper and Cardboard: Waste ban: hauler and generator outreach and enforcement</li> </ul>	<ul style="list-style-type: none"> <li>With EPA grant - support food waste diversion at 55 supermarkets and add another 25 stores. <b>Have a total of 35</b></li> <li>Give Wastewise awards to 6 largest supermarket chains for joining Wastewise and diverting organics. <b>Done</b></li> <li>Provide ongoing technical assistance to composting facilities – perform 30+ site visits <b>Done</b></li> <li>Negotiate and enter into MOU with Mass Food Assoc. to have organics diversion industry wide by 2010 <b>Done</b></li> <li>Hold Organics Summit with 200 participants in Spring, 2005 <b>Done</b></li> <li>With EPA grant – provide farmers with hands-on technical assistance on BMP's of food waste composting. <b>Done</b></li> <li>Award 1 grant to food waste diversion business through RIRC. <b>Done</b></li> <li>Provide ongoing technical assistance to the 150+ municipal business-recycling programs. Hold mini-business recycling conference. <b>Done</b></li> <li>Begin development of a hospital strategy through expansion of the Shattuck Hospital Initiative. <b>Done</b></li> <li>Develop strategy for enforcement of waste bans on haulers and generators <b>Done</b></li> </ul>
		<b>Solid Waste Diversion: Construction and Demolition Debris Program Development and Evaluation</b> <ul style="list-style-type: none"> <li>Wood and Gypsum Wallboard: C&amp;D Subcommittee: Continue to hold regular</li> </ul>	<ul style="list-style-type: none"> <li>Promulgate C&amp;D Waste ban - Winter 2005 <b>Promulgated October 05</b></li> <li>Develop and issue guidance by Winter 2005, hold 2 workshops on</li> </ul>

Key Strategies	2005 -2006 Actions		
	EPA NEW ENGLAND	MADEP	MILESTONES
		<p>committee and subcommittee meetings on the C&amp;D ban and market development <b>Ongoing</b></p> <ul style="list-style-type: none"> <li>• Wood and Gypsum Wallboard: Promulgate C&amp;D ban, conduct outreach and oversee facility waste ban planning</li> </ul> <p><b>Grants/Loans/Technical Assistance/Outreach</b></p> <ul style="list-style-type: none"> <li>• Wood and Gypsum Wallboard: Gypsum wallboard market development/product stewardship</li> <li>• Wood and Gypsum Wallboard: Targeted technical assistance and market development grants</li> </ul>	<p>compliance with new ban. <b>Guidance and workshop developed Fall 05</b></p> <ul style="list-style-type: none"> <li>• Hold 5 Gypsum workgroup meetings to develop strategy to divert. <b>Done</b></li> <li>• Hold 5 Wood workgroup meetings to foster diversion. <b>Done</b></li> <li>• Initiate Carpet workgroup to develop diversion strategy. <b>Done</b></li> <li>• Award 1 grant to business diverting C&amp;D material <b>Awarded 2 grants</b></li> </ul>

Key Strategies	2005 -2006 Actions		
	EPA NEW ENGLAND	MADEP	MILESTONES
		<b>Solid Waste Diversion/ Hazardous Products: Mercury Products, Mercury in Schools, and Pesticides Permitting</b> <ul style="list-style-type: none"> <li>Oversee Municipal Waste Combustor Mercury Material Separation Plans</li> </ul> <b>Grants/Loans/Technical Assistance/Outreach</b> <ul style="list-style-type: none"> <li>EPA Hospital Audit Program</li> <li>Pesticide Reduction and Healthy Lawns</li> <li>Support School Chemical Cleanouts</li> <li>Work with State Sustainability Council <i>Ongoing</i></li> </ul>	<ul style="list-style-type: none"> <li>Review, approve and monitor 6 municipal waste combustor mercury material separation plans <i>Done</i></li> <li>Complete Hospital PPIS final report and develop/post 2 case studies <i>FY06</i></li> <li>Hold 8 Pesticide Reduction Workshops for up to 20 communities. <i>Done</i></li> <li>Award grant to 4 communities for school chemical cleanouts and management <i>Done</i>.</li> <li>Participate in implementation plan development for State Sustainability – Toxics. <i>Done</i></li> </ul>
		<b>Solid Waste Diversion: Basic Program Infrastructure</b> <b>Grants/Loans/Technical Assistance/Outreach</b> <ul style="list-style-type: none"> <li>Bottle Bill Oversight/Registration/Grants</li> <li>Business Recycling Assistance – support WasteCap ongoing business assistance</li> <li>Buy Recycled/Market Development Support– Assist in Buy Recycled/EPP Vendor Fair, serve as clearinghouse for information and support requests</li> <li>DARP Oversight</li> <li>Municipal Recycling Grants – Equipment and Education continue to provide grants to support new and expanded municipal waste reduction initiatives</li> <li>Promote Product Stewardship: Carpet, Electronics, and Paint</li> <li>Regional Recycling Coordination/Technical Assistance with municipal officials</li> <li>Surplus Property Reuse and Distribution: Coordinate and document municipal exchanges</li> <li>School Recycling Programs/Green Team <i>Ongoing</i></li> </ul>	<ul style="list-style-type: none"> <li>Award \$1.375 M (1.268m) in redemption center grants <i>Done</i></li> <li>Register Redemption Centers twice. <i>Done</i></li> <li>Collaborate with WasteCap on providing technical assistance to businesses <i>Not Done</i></li> <li>Hold 6 workshops at EPP Vendor Fair. Serve on organization comm. <i>Done</i></li> <li>Begin strategizing and holding meetings on DARP post 2005 <i>Done</i></li> <li>Award grants to 50 communities for recycling equipment and education totaling approximately \$200,000. <i>Done</i></li> <li>Sign Product Stewardship Agreement on Paint. <i>Done</i></li> <li>Increase Surplus Property Reuse and distribution by 25%. Document all matches. <i>Done</i></li> <li>Initiate Carpet workgroup to develop diversion strategy <i>Done</i></li> </ul>

Key Strategies	2005 -2006 Actions		
	EPA NEW ENGLAND	MADEP	MILESTONES
		<b>Sustainability Program Development and Evaluation</b> <ul style="list-style-type: none"> <li>Sustainability Council Participation</li> </ul> <b>Grants/Loans/Technical Assistance/Outreach</b> <ul style="list-style-type: none"> <li>Web Page Development to support key initiatives <i>Ongoing</i></li> </ul>	<ul style="list-style-type: none"> <li>Develop and implement work plan for the Waste Reduction component of the State Sustainability Plan <i>Done</i></li> <li>Attend monthly SSC Meetings <i>Done</i></li> </ul>
<b>Toxics Management and Reduction – TURA Program</b>  (NOTE: This is a multi media program equally relevant to Air and Industrial Wastewater Goals)		<b>Reporting</b> <ul style="list-style-type: none"> <li>TURA Annual Report collection, management, review and analysis</li> <li>Tier 2 Right to Know reporting assistance to regulated community <i>Ongoing</i></li> </ul> <b>Public Information</b> <ul style="list-style-type: none"> <li>TURA Progress Assessment: Prepare Annual TURA Data Release and Report to Legislature</li> </ul> <b>Program Development and Evaluation</b> <ul style="list-style-type: none"> <li>Develop TURA Redesign Legislation with TURA Partners (secretary's priority) <i>Done</i></li> <li>Coordination with external "TURA Partners" <i>Ongoing</i></li> <li>Toxics Use Reduction Regulatory Package: Streamlining regulations <i>Done</i></li> </ul> <b>Permitting</b> <ul style="list-style-type: none"> <li>Issue Toxics Use Reduction Planner Certifications</li> </ul> <b>Fees</b> <ul style="list-style-type: none"> <li>Issue Toxics Use Reduction Bill <i>Done</i></li> </ul> <b>Data Systems Development</b> <ul style="list-style-type: none"> <li>TURA eDEP – Improve filing forms to increase percentage of companies filing electronically <i>Done</i></li> </ul> <b>Compliance and Enforcement</b> <ul style="list-style-type: none"> <li>TURA Annual Report collection, management, compliance and enforcement and analysis <i>Ongoing issued 64 enforcement actions for reporting violations in FFY 05 and 9 in FFY06</i></li> <li>Inspect Large Quantity Toxics Users and take appropriate follow up enforcement <i>Did 130 inspections at LQTUs issued 11 enforcement actions in FFY05 and 104 inspections and 56 enforcement actions in FFY06</i></li> </ul>	<ul style="list-style-type: none"> <li>Manage reports from 620 Large Quantity Toxics <i>Users 633 reports in FFY05 and 585 in FFY06</i></li> <li>Issue annual TURA Data Release and Report to legislature by July 2005 <i>2003 Data Release Issued October 2005; 2004 data released August 2006, legislative reports issued in February 2005 and February 2006</i></li> <li>Issue 90 Toxics Use Reduction Planner Certifications <i>Received and acted on 69 in FFY 2005 and 170 in FFY 2006</i></li> <li>Issue \$4.1 million of TURA bills to approximately 600 facilities <i>Done</i></li> </ul>

Key Strategies	2005 -2006 Actions		
	EPA NEW ENGLAND	MADEP	MILESTONES
<p><b>Beyond ERP</b></p> <p>(Note: The program innovation is equally relevant to air &amp; industrial wastewater goals)</p> <p><b>Apply ERP techniques to a broad portion of the regulated universe :</b></p> <ul style="list-style-type: none"> <li>• Establish performance targets</li> <li>• Evaluate performance against those targets</li> <li>• Streamline oversight if performance is adequate, and</li> <li>• Additional measures if performance is below target</li> </ul>		<ul style="list-style-type: none"> <li>• Continued Assessment and program oversight streamlining on six sectors: solid waste transfer stations, Biotech facilities, small engines and turbines (distributed generators), mercury discharges from dental offices, stage II gasoline facilities, and photo processors. These projects are being done as part of a “design/build strategy” to help inform the overall design of the Beyond ERP initiative.</li> <li>• Assessment and program oversight of new sectors for FFY05: Illegal dischargers to drinking water protection areas, closed landfills, soils processors, asbestos, and other targets to be identified <b>Ongoing</b></li> <li>• Implementation of new oversight strategy that provides routine field oversight to “most risky” facilities, and report review and appropriate enforcement response to other sources <b>Done</b></li> <li>• Development and implementation of new inspection types to be used in assessment and to broaden our field presence <b>Ongoing</b></li> </ul>	
<p><b>Proper Operation of Solid Waste Management Facilities</b></p>		<p><b>Compliance and Enforcement</b></p> <ul style="list-style-type: none"> <li>• Beyond ERP: HIHV project: Inactive Landfill Assessment <b>Ongoing</b></li> <li>• Review groundwater monitoring reports from solid waste management facilities and take appropriate follow up action</li> <li>• Review financial assurance reports from solid waste management facilities and take appropriate follow up action <b>Reviewed 66 reports</b></li> <li>• Conduct inspections and follow up enforcement at solid waste management facilities</li> </ul> <p><b>Program Development and Evaluation</b></p> <ul style="list-style-type: none"> <li>• Beyond ERP: Petroleum Contaminated Soils</li> </ul>	<ul style="list-style-type: none"> <li>• Conduct approximately 450 inspections at solid waste management facilities and take appropriate follow up enforcement <b>FFY 05Did 713 Inspections issued 133 enforcement actions</b> <b>FFY06: 724 inspections issued 28 HLE and 56 LLE</b></li> <li>• Work on over 200 active solid waste facility permit and plan approval applications, and beneficial use determinations <b>FFY05: Completed action on 236 applications</b></li> </ul>

Key Strategies	2005 -2006 Actions		
	EPA NEW ENGLAND	MADEP	MILESTONES
		<p>Processors Project <b>Ongoing</b></p> <ul style="list-style-type: none"> <li>• Evaluate asbestos management at SW processing facilities <b>Ongoing</b></li> <li>• Beyond ERP: Asbestos Targeted Group and HIHV: Asbestos in soils regulations <b>Ongoing</b></li> <li>• Beyond ERP: Transfer Station Project: Alternative Penalty Policy <b>Parked</b></li> <li>• Beyond ERP: Transfer Station Project: Certification Regulations <b>Decided not to do</b></li> <li>• Regulation, Policy and Guidance Development for Solid Waste (non Beyond ERP): Facility, Beneficial Use Determinations, Facility Based Impact Assessments, Waste Bans, Master Plan Implementation, H2S Action Level, Municipal Ferrous Policy <b>Done</b></li> <li>• Regulation, Policy, and Guidance Development for Solid Waste (non Beyond ERP): guidance for assessing groundwater contamination at landfills and siting new landfill capacity in water quality sensitive areas <b>Parked</b></li> <li>• Work with the external Solid Waste Advisory Committee and Subcommittees <b>Ongoing</b></li> </ul> <p><b>Permitting</b></p> <ul style="list-style-type: none"> <li>• Issue state-wide Solid Waste Beneficial Use Determination Permits for waste reuse activities</li> <li>• Issue permits for solid waste management facility development and expansion</li> </ul>	<p><b>FFY06: Completed action on 272 applications</b></p> <ul style="list-style-type: none"> <li>• Promulgate Solid Waste facility regulations and develop related guidance by winter 04-05 <b>Regulations promulgated Fall 2005</b></li> <li>• Manage over 1000 reports from solid waste facilities <b>Done</b></li> </ul>

Key Strategies	2005 -2006 Actions		
	EPA NEW ENGLAND	MADEP	MILESTONES
<b>RCRA</b>  Joint effort to streamline the RCRA Authorization process	<ul style="list-style-type: none"> <li>Co-chair national functional equivalence workgroup</li> <li>Work with DEP on authorization process streamlining pilot package</li> <li>Work with DEP to establish acceptable satellite accumulation area policy</li> </ul>	<b>Program Development and Evaluation</b> <ul style="list-style-type: none"> <li>Participate in the ECOS Project - Functional Equivalence Workgroup designed to provide states with flexibility in the implementation of Federal hazardous waste management requirements (Commissioner Office priority)</li> <li>Beyond ERP: Biotech Project: develop DEP satellite accumulation regulations and hazardous waste waiver regulations</li> <li>Develop Hazardous Waste Resource Conservation and Recovery Act Authorization Regulations Develop a plan for making progress on Federally mandated RCRA authorization - C-4 to C-9 <b><i>Parked: replaced with RCRA Corrective Action</i></b></li> <li>Evaluate EPA Project XL Laboratory Project which provides universities with temporary variances from certain hazardous waste management regulations to determine if the project should be continued, per EPA grant commitment <b><i>EPA issued regulations to extend project XL we need to do the same</i></b></li> <li>Serve on the Board of Directors of the Northeast Waste Management Organization Association to promote interstate cooperation/ coordination <b><i>Ongoing</i></b></li> <li>Work with the external Hazardous Waste Advisory Committee <b><i>Ongoing</i></b></li> <li>Verify permit renewal baseline established by EPA NE <b><i>Done</i></b></li> <li>Draft 310 CMR 21( c ) regulations necessary to be authorized for RCRA Corrective Action</li> </ul> <b>Permitting</b> <ul style="list-style-type: none"> <li>Permitting: Issue TSDF Licenses, Transporter Licenses , Emergency Treatment approvals, Hazardous Waste Treatability Studies, and Transporter Vehicle Identification Numbers</li> <li>Perform Hazardous Waste Facility Siting</li> </ul>	<ul style="list-style-type: none"> <li>Develop Satellite accumulation policy by October 04 <b><i>Done</i></b></li> <li>Authorization streamlining pilot chosen by February 2005 <b><i>Deemed infeasible</i></b></li> <li>Final regs, AG statement, PD and MOU submitted to EPA by 3/30/07 <b><i>Ongoing for corrective action – have draft regulations, developing AG statement, program description and memorandum of agreement</i></b></li> <li>Impasse on national Functional Equivalence Workgroup product resolved by Spring 2005 <b><i>Done</i></b></li> <li>Final national Functional Equivalence Workgroup product issued as guidance by Summer 2005 <b><i>National Guidance issued by EPA</i></b></li> <li>Permit renewal baseline set by end of FY05 <b><i>Done</i></b></li> <li>Develop plan for RCRA authorization progress by September 30, 2005 <b><i>Done</i></b></li> <li>Issue 4 TSDF Licenses, <b><i>Did 5 in FFY05 and 4 in FFY06</i></b> 30 Transporter Licenses, <b><i>Did 20</i></b> 10 Emergency Treatment approvals <b><i>Did 1</i></b> and 100s of Transporter Vehicle Identification Numbers</li> <li>Process 350,000 hazardous waste manifests annually <b><i>Done</i></b></li> <li>Manage 1560 + hazardous waste transporter monthly operating reports annually <b><i>Done</i></b></li> <li>Inspect approximately 100 large quantity hazardous waste generators and take appropriate follow up enforcement <b><i>FFY05:Did 143 inspections issued</i></b></li> </ul>



Key Strategies	2005 -2006 Actions		
	EPA NEW ENGLAND	MADEP	MILESTONES
		<p>Determinations Under MGL C21D (if needed)</p> <p><b>Reporting</b></p> <ul style="list-style-type: none"> <li>Process Hazardous Waste Manifests</li> <li>Manage routine regulatory reporting requirements and associated data systems development &amp; management activities for electronic monthly operating report from hazardous waste transporters</li> <li>Manage routine regulatory reporting requirements and associated data systems development &amp; management activities for hazardous waste biennial report and RCRIS and submit compliance and enforcement reports to EPA <i>Ongoing</i></li> </ul> <p><b>Compliance and Enforcement</b></p> <ul style="list-style-type: none"> <li>Take enforcement for hazardous waste related and Land Disposal Facility reporting violations</li> <li>Perform compliance monitoring, report review, inspections and enforcement for hazardous waste transporters <i>Did 8 inspections issued 21 enforcement actions</i></li> <li>Perform groundwater assessment monitoring at hazardous waste and solid waste <i>facilities Reviewed 8 reports at TSDFs as part of licensing, closing or post closure monitoring</i></li> <li>Review financial assurance reports from hazardous waste management facilities and take appropriate response <i>Reviewed 24 reports from facilities and 109 from transporters</i></li> <li>Inspect and take appropriate enforcement actions at hazardous waste generators, offsite hazardous waste recyclers, and Treatment Storage and Disposal Facilities</li> </ul> <p><b>Data Systems Development</b></p> <ul style="list-style-type: none"> <li>Systems Development: CDX Network readiness grant - RCRA redesign, EPICS integration, testing, data transfer protocols to EPA</li> </ul> <p><b>Fees</b></p> <ul style="list-style-type: none"> <li>Support Hazardous Waste Manifest and Cost</li> </ul>	<p><i>62 enforcement actions FFY0: 138 inspections 39 LLE and 9 HLE</i></p> <ul style="list-style-type: none"> <li>Inspect several hundred small quantity hazardous waste generators and take appropriate follow up enforcement <i>FFY05 132 inspections issued 89 enforcement actions FFY06: 147 inspections, 41 LLE 14 HLE</i></li> <li>Inspect all 13 treatment, storage and disposal facilities and take appropriate follow up enforcement annually <i>Done issued 3 enforcement actions in FFY05 and none in FFY06</i></li> <li>Inspect 25 commercial offsite recyclers and take appropriate follow up enforcement <i>FFY05: Did 15 inspections at licensed recycling facilities issued 8 enforcement actions FFY06: 17 inspections 3enforcement actions</i></li> <li>Review several hundred reports from hazardous waste management facilities <i>Done</i></li> <li>RCRA CDX Readiness Grant <ul style="list-style-type: none"> <li>DEP runs successful translations in the EPA test environment</li> <li>DEP final decision to move translated data into production</li> <li>DEP runs a full-replace translation from EPICS into the production RCRA Info handler module two months after EPA HQ has translation software in place.</li> </ul> </li> </ul> <p><i>Done – node has successfully</i></p>

Key Strategies	2005 -2006 Actions		
	EPA NEW ENGLAND	MADEP	MILESTONES
		Recovery Operations with BWSC <i>Ongoing</i>	<i>transferred data, currently in final testing and adjustment</i>
Industrial Wastewater		<b>Program Development and Evaluation</b> <ul style="list-style-type: none"> <li>Beyond ERP: Biotech Project: IWW Certified Operator Regulations and Permit Standards <i>Done</i></li> <li>Beyond ERP: Dental Mercury Project: Development <i>Done</i></li> <li>Beyond ERP: Illegal Discharges to Drinking Water Protection Areas Targeted Group lead</li> <li>Regulation, Policy and Guidance Development for Industrial Wastewater (non Beyond ERP): BRP groundwater discharge amendments <i>Strategy agreed upon</i></li> </ul> <b>Reporting</b> <ul style="list-style-type: none"> <li>Beyond ERP: Dental Mercury: Manage the voluntary certification process <i>Done</i></li> </ul> <b>Permitting</b> <ul style="list-style-type: none"> <li>Permit industrial discharges to groundwater</li> <li>Coordinate with EPA on NPDES permits <i>Ongoing</i></li> </ul> <b>Compliance and Enforcement</b> <ul style="list-style-type: none"> <li>Conduct inspections and review monitoring data from industrial wastewater dischargers and take appropriate follow up enforcement</li> </ul>	

Key Strategies	2005 – 2006 Actions		MA DEP Outputs
	EPA NE	MA DEP	Milestone
Waste Site Cleanup			
Maximize Risk Reduction		<ul style="list-style-type: none"> <li>Provide technical assistance to parties proposing IRAs</li> <li>Oversee response actions in the field and mobilize state contractors where responsible</li> </ul>	<ul style="list-style-type: none"> <li>Open IRAs reviewed for CEP conditions <i>2005-2006: ongoing</i></li> <li>Downgradient Property Status (DPS)</li> </ul>
Ensure			

Key Strategies	2005 – 2006 Actions		MA DEP Outputs
	EPA NE	MA DEP	Milestone
Implementation of Mandatory Risk Reduction Measures		<p>parties cannot or will not respond</p> <ul style="list-style-type: none"> <li>• Provide oral approvals of IRA Plans</li> <li>• Review and approve follow-up written IRA Plans</li> <li>• Perform field visits to oversee IRAs in progress</li> <li>• Track progress in the database to ensure timely implementation of IRAs</li> <li>• Review IRA Completion Statements</li> <li>• Enforce deadlines for PRPs to perform mandatory risk reduction measures</li> </ul> <p><i>05-2006: All risk reduction actions ongoing</i></p>	<p>and Utility –Related Abatement Measures (URAMs) reviewed for IRA/CEP conditions</p> <p><i>2005-2006: ongoing</i></p> <ul style="list-style-type: none"> <li>• Enforcement actions initiated against parties found in noncompliance</li> </ul> <p><i>2005-2006: Continued to use tools against noncompliers: ACO, ACOP, Unilateral Order, PAN, NORA/Lien</i></p>
Oversee and Perform Emergency Response Activities		<ul style="list-style-type: none"> <li>• Work with federal, state, and local authorities to plan for and define DEP’s role in any incidents involving weapons of mass destruction</li> </ul> <p><i>2005-2006: Ongoing internal discussions and workgroup to explore ways for MassDEP to assist in the Commonwealth’s preparedness missions</i></p> <ul style="list-style-type: none"> <li>• Coordinate with the Coast Guard when oil or hazardous material is released to the ocean, and act as the State On-Scene Coordinator (SOSC) in the Incident Command System (ICS)</li> </ul> <p><i>2005-2006: ongoing</i></p> <ul style="list-style-type: none"> <li>• Respond to fish kills, in accordance with an inter-agency MOU with the Department of Fish and Game</li> </ul> <p><i>2005-2006: ongoing</i></p> <ul style="list-style-type: none"> <li>• Respond to releases on state highways, in accordance with an MOU with the MA Highway Department</li> </ul> <p><i>2005-2006: ongoing</i></p> <ul style="list-style-type: none"> <li>• Coordinate with the MA Department of Public Health in responding to releases of medical waste to the environment</li> </ul> <p><i>2005-2006: ongoing</i></p> <ul style="list-style-type: none"> <li>• Respond with the Department of Fire Services Regional HazMat teams and coordinate remediation of hazmat incidents</li> </ul>	<p><i>2006: Serve as co-chair (with the US Coast Guard) of the Boston Area Planning Committee</i></p> <p><i>2005-2006: With 10 agencies, revised Uniform Response Manual for responding to highway incidents</i></p> <p><i>2006: Developed Mass Decontamination Unit cards to deal with decontamination water at 11 acute care facilities</i></p>

Key Strategies	2005 – 2006 Actions		MA DEP Outputs
	EPA NE	MA DEP	Milestone
		<i>2005-2006: ongoing</i>	
Address Serious Risks Using Public Funds with State Contractors		<ul style="list-style-type: none"> <li>Conduct time-critical assessment and remediation activities (such as residential indoor air evaluation, emergency water supply) to address risks to sensitive receptors in cases where there is no known, willing, or able PRP</li> <li>Investigate potential sources of contamination and conduct targeted remediation to protect municipal water supplies in various communities</li> </ul> <p><i>2005-2006: Both actions ongoing</i></p> <ul style="list-style-type: none"> <li>Investigate the sources of perchlorate contamination in surface water and public and private drinking water wells</li> <li>Recover, to the maximum extent possible, the costs incurred by DEP in performing publicly funded risk reduction actions</li> </ul>	<ul style="list-style-type: none"> <li>Implement the Urban NORA/Lien Enforcement Project</li> </ul> <p><i>2005: WERO indicated its intent to issue a lien on 13 sites and hire state contractors to perform the cleanups. Six responded; NONS were issued to the remainder</i></p> <p><i>2005: CERO issued one NORA that resulted in an ACOP;</i></p> <p><i>2006: CERO issued two NORAs; one NOIM</i></p> <p><i>2006: NERO issued 3 NORAs, resulting in PRP action in one case and state-funded IRAs for the other two.</i></p> <p><i>Investigated perchlorate in drinking water wells</i></p> <p><i>2005: Boxborough, Boxford, Chesterfield, Hadley, Tewksbury, Westford, Westport, and Williamstown</i></p> <p><i>2006: Easthampton and Barnstable</i></p> <p><i>2005: \$796,000</i></p> <p><i>2006: \$1,310,000</i></p>
Triage		<ul style="list-style-type: none"> <li>Screen response action submittals and identify IRA, risk reduction, and enforcement needs and opportunities</li> </ul> <p><i>2005-2006: ongoing</i></p> <ul style="list-style-type: none"> <li>Refine triage process, criteria, and forms as needed to reflect and better support program operations in the face of significant staffing reductions</li> </ul> <p><i>2005: completed</i></p> <ul style="list-style-type: none"> <li>Ensure appropriate level of IRA and other follow-up at those sites where risk and/or enforcement concerns are greatest</li> </ul> <p><i>2005-2006: ongoing</i></p>	
		<ul style="list-style-type: none"> <li>Identify sites (through triage and other means)</li> </ul>	<ul style="list-style-type: none"> <li>Review on at least an annual basis the</li> </ul>

Key Strategies	2005 – 2006 Actions		MA DEP Outputs
	EPA NE	MA DEP	Milestone
Provide Direct Oversight of Response Actions at the Most Complex Sites		<p>that pose the most concern with respect to complexities and/or risks to health, safety, public welfare, or the environment</p> <ul style="list-style-type: none"> <li>Identify specific IRA conditions and/or contaminant transport/exposure pathways where direct DEP oversight is necessary to ensure adequate short and/or long-term progress and resolutions (such as sites posing threats to public drinking water supplies)</li> <li>Articulate specific objectives and parameters of DEP oversight, and assign staff accordingly</li> </ul> <p>2005-2006: All actions ongoing</p>	<p>need to maintain direct DEP oversight, considering site conditions, progress made on achieving objectives, resource availability, and oversight needs at other sites -</p> <p>2005-2006: ongoing</p>
<p><b>Increase Rate of Cleanups at Waste Sites</b></p> <p>Enforce Against Parties Not Performing Cleanups</p>		<ul style="list-style-type: none"> <li>Enforce against parties who fail to notify DEP of releases as required by the MCP</li> <li>Issue anniversary reminder letters</li> <li>Strive to ensure first year preliminary response action compliance</li> <li>Issue Notices of Noncompliance and Interim Deadline letters</li> <li>Issue penalties and unilateral orders</li> <li>Negotiate Administrative Consent Orders</li> <li>Identify sites without viable PRPs and develop case-specific strategies to address them</li> <li>Identify recalcitrant PRPs and develop case-specific strategies to address them</li> </ul> <p>2005-2006: All actions ongoing</p>	<ul style="list-style-type: none"> <li>Send NONs and issue orders and penalties to PRPs who fail to Tier Classify or conduct phase work</li> </ul> <p>2005-2006: ongoing</p> <ul style="list-style-type: none"> <li>Send NONs to PRPs whose Tier I permits and Tier II classifications have expired</li> </ul> <p>2005-2006: ongoing</p> <ul style="list-style-type: none"> <li>Send NONs to PRPs whose sites are in Phase V or ROS if the systems are not operating properly or being monitored</li> </ul> <p>2005-2006: ongoing</p> <ul style="list-style-type: none"> <li>Implement the Urban NORA/Lien Enforcement Project</li> </ul> <p>2005: WERO indicated its intent to issue a lien on 13 sites and hire state contractors to perform the cleanups. Six responded; NONs were issued to the remainder. 2005: CERO issued one NORA that resulted in an ACOP;</p> <p>2006: CERO issued two NORAs; one NOIM</p> <p>2006: NERO issued 3 NORAs, resulting</p>

Key Strategies	2005 – 2006 Actions		MA DEP Outputs
	EPA NE	MA DEP	Milestone
			<i>in PRP action in one case and state-funded IRAs for the other two.</i> <ul style="list-style-type: none"> <li>• Work with DFS to address abandoned USTs</li> </ul> <i>2005-2006: ongoing</i>

Key Strategies	2005 – 2006 Actions		MA DEP Outputs
	EPA NE	MA DEP	Milestone
Streamline and Maintain Compliance Tracking Systems		<ul style="list-style-type: none"> <li>Create records in the Waste Site Cleanup (WSC) database after receiving notice of a release or threat of release</li> <li>Enter information from transmittal forms into the WSC database as reports are received</li> <li>Enter information into the WSC database summarizing DEP-issued correspondence</li> <li>Perform queries to evaluate the status and history of submittals at individual sites or categories of sites, and to generate compliance reports for targeted enforcement</li> <li>Automate the generation of NONs</li> <li>Develop analysis tools to improve evaluation of deadline compliance</li> <li>Revise BWSC transmittal forms as needed</li> <li>Increase use of online transmittal forms with incentives and outreach to LSPs and PRPs</li> <li>Improve user interface of WSC database by staff, both in the field and in the office</li> </ul> <p>2005-2006: All actions ongoing</p>	<ul style="list-style-type: none"> <li>Automate the generation of NONs <i>2005: Created a new database category that classifies non-responders, allowing BWSC to address them as a distinct universe. Non-responder data sets were evaluated using these new categories so targeted enforcement strategies could be developed. NON templates were used with the intention that they would eventually be automated.</i></li> <li>Increase use of online transmittal forms with incentives and outreach to LSPs and PRPs <i>2005: Developed strategies, including outreach and training, Internet access to BWSC files, and potential electronic filing mandates.</i> <i>2006: Use of e-filing increased to 845 submittals from 462 the previous year</i></li> </ul> <p><i>2006: Promulgated regulations requiring that Remedial Monitoring Reports be submitted electronically</i></p>
Encourage Deadline Compliance by Collecting Annual Compliance Fees		<ul style="list-style-type: none"> <li>Continue to review and invoice fixed Annual Compliance Fees 2005-2006: ongoing</li> <li>Continue to streamline billing procedures 2005-2006: ongoing</li> </ul>	<p>2005: fees billed = \$4.86M; fee revenue received = \$10.5M 2006: fees billed = \$13.1M; fee revenue received = \$10.7M</p> <p>2006: streamlining helped to reduce the multi-year backlog, resulting in a higher than normal level for fees billed</p>
Ensure the Quality of Cleanups at Waste Sites		<ul style="list-style-type: none"> <li>Conduct site audits as required by law:</li> <li>Level 1 audits (focused submittal reviews)</li> <li>Level 2 audits (field inspections to ensure that IRAs, RAMs, Remedy Operation Status, and AUL Obligation and Maintenance conditions are</li> </ul>	<ul style="list-style-type: none"> <li>Audit all sites at which AULs are implemented</li> </ul> <p>2005-2006: ongoing</p>

Key Strategies	2005 – 2006 Actions		MA DEP Outputs
	EPA NE	MA DEP	Milestone
Maintain Compliance Checks/ Inspections for Privatized Cleanups and Conduct Enforcement to Address Noncompliance with MCP Performance Standards		<p>implemented)</p> <ul style="list-style-type: none"> <li>Level 3 audits (comprehensive submittal reviews and site inspections to evaluate overall quality and compliance with 21E and the MCP) <i>2005-2006: All actions ongoing</i></li> <li>Review LSP performance patterns during audits <i>2005-2006: ongoing</i></li> <li>Issue NONs or higher level enforcement to PRPs who violate the MCP requirements <i>2005-2006: ongoing</i></li> <li>Publish audit findings in LSPA newsletter <i>2005-2006: ongoing</i></li> <li>Conduct LSP training on audit case studies <i>2005-2006: ongoing</i></li> <li>Refer LSPs whose opinions persistently or egregiously violate MCP standards to the LSP Board for disciplinary investigation <i>2005-2006: ongoing</i></li> <li>Refer cases to the AG for civil or criminal enforcement <i>2005-2006: ongoing</i></li> <li>Provide technical support and/or testimony in support of LSP Board disciplinary investigations and AG enforcement actions <i>2005-2006: Assisted Board during investigations of several complaints</i></li> <li>Conduct High Visibility/High Impact studies to ensure that the MCP is adequately protecting the public <ul style="list-style-type: none"> <li>Schools Initiative</li> </ul> </li> </ul>	<p><i>2005-2006: WERO increased auditing actions for remedial systems, yielding increased compliance through issuance of one NON and two ACOPs.</i></p> <p><i>2005: Issued one administrative penalty to a consultant and 6 NONs to LSPs/consultants</i></p> <p><i>2006: Issued 5 ACOPs and 1 NON to LSPs/consultants</i></p> <p><i>2005-2006: Published audit and enforcement findings in 14 LSPA Newsletters</i></p> <p><i>2005-2006: Conducted nine LSP classes using audit case studies</i></p> <p><i>2005-2006: Referred five LSPs to the LSP Board for disciplinary investigation</i></p> <p><i>Each regional office selected a community to determine whether 21E sites proximate (within 1000 feet) of schools and other sensitive receptors were in compliance with the MCP. No sites were found to pose a risk to the children.</i></p> <p><i>2005: The Fall River study evaluated 89</i></p>



Key Strategies	2005 – 2006 Actions		MA DEP Outputs
	EPA NE	MA DEP	Milestone
		<p>➤ Zone 2 Initiative</p>	<p><i>reported releases near 48 schools. The overall compliance rate was 96 percent.</i></p> <p><i>2005-2006: The Chelsea study evaluated 64 reported releases near 11 schools. The overall compliance rate was 92 percent</i></p> <p><i>2005-2006: The Worcester study evaluated 303 reported releases near 117 schools/child care centers. The overall compliance rate was 94 percent</i></p> <p><i>2005-2006: The Greenfield, Holyoke and Springfield studies evaluated 33 reported releases near 101 schools. The compliance rate was 100 percent</i></p> <p><i>2006: Each region investigated one or more communities with a Zone II for a public water supply proximate to a number of 21E sites. The purpose of the initiative was to determine the sites' compliance status and conduct field activities where the status was unclear. All investigative activities were completed within the reporting period. Evaluation and final report ongoing.</i></p>
Conduct Actions to Enhance/Confirm the Quality of Site Investigation Data		<ul style="list-style-type: none"> <li>○ Conduct double-blind laboratory study</li> </ul>	<p><i>2005-2006: MassDEP conducted a large double-blind laboratory evaluation study, involving 19 commercial laboratories that provide the majority of analytical support services to parties assessing and cleaning up hazardous waste sites in Massachusetts. The vast majority of the laboratories evaluated were able to consistently quantify most analytes within 20 percent of the actual value. This excellent result is well within the most stringent acceptance criteria in use by the industry.</i></p>
Ensure that		<ul style="list-style-type: none"> <li>● Issue Wave 2 public hearing draft</li> </ul>	<p><i>2006: Published final Wave 2 regulations</i></p>

Key Strategies	2005 – 2006 Actions		MA DEP Outputs
	EPA NE	MA DEP	Milestone
Policies and Regulations Promote Program Goals		<p><i>2005: completed</i></p> <ul style="list-style-type: none"> <li>Finalize data enhancement program</li> </ul> <p><i>2005: completed</i></p> <ul style="list-style-type: none"> <li>Issue Q&amp;As</li> </ul> <p><i>2005-2006: ongoing</i></p> <ul style="list-style-type: none"> <li>Issue draft policy on feasibility evaluations for <ul style="list-style-type: none"> <li>Critical Exposure Pathways</li> <li>Permanent vs. Temporary Solutions</li> <li>Selection of Remedial Action Alternatives</li> <li>Reducing/Detoxifying OHM Present at a Site Above UCLs</li> <li>Destruction/Detoxification vs. Capping</li> </ul> </li> </ul> <p><i>2006-2006: ongoing</i></p> <ul style="list-style-type: none"> <li>Issue final Monitored Natural Attenuation guidance</li> </ul> <p><i>2005-2006: ongoing</i></p> <ul style="list-style-type: none"> <li>Issue final asbestos-in-soil policy</li> </ul> <p><i>2005-2006: ongoing</i></p>	<p><i>WSC-04-160 was issued 7/2004; 2005-2006: work on the remaining components is ongoing</i></p>

Key Strategies	2005 – 2006 Actions		MA DEP Outputs
	EPA NE	MA DEP	Milestone
<p><b>Provide Direct Oversight for Federal Sites</b></p> <p>National Priorities List</p>	<p>Provide MA DEP funding under a Superfund Block Funding Cooperative Agreement (V99174203) which includes supporting National Priority List (NPL) activities for 35 NPL sites and core activities for eligible non-site specific work. In general, this grant covers MA DEP personnel time and some state contractual work in support of EPA NPL program.</p>		
<p>National Priorities List</p>	<p>Work with the state on a range of site clean up related activities including: review, comment, and concurrence on all major documents, participation in public meetings, state contractor oversight, identification of state ARARs, and timely communication of issues and concerns. Work with MA DEP to submit (Under the Superfund Regulation, 40 CFR Part 35 Subpart O), Quarterly Progress Reports, Financial</p>		

Key Strategies	2005 – 2006 Actions		MA DEP Outputs
	EPA NE	MA DEP	Milestone
	<p>Status Reports, MBE/WBE Reports, and Property Inventory Reports, if applicable.</p> <p>Work with DEP on Institutional Controls – an area of renewed emphasis – to evaluate and resolve overarching issues impacting numerous sites</p>		

Key Strategies	2005 – 2006 Actions		MA DEP Outputs
	EPA NE	MA DEP	Milestone
National Priorities List	<b>Atlas Tack site:</b> Continue Remedial Action, begin additional phases of remedial action as funding allows	<b>Atlas Tack site:</b> <ul style="list-style-type: none"> <li>Continue oversight of Remedial Action</li> </ul> <i>2005-2006: ongoing</i>	
	<b>Baird and McGuire site:</b> Obtain DEP review and concurrence of an Explanation of Significant Differences and begin cooperative effort on Institutional Controls concurrence of a Five-Year review	<b>Baird and McGuire site:</b> <ul style="list-style-type: none"> <li>Takeover of operation and maintenance activities</li> </ul> <i>2005: completed</i> <ul style="list-style-type: none"> <li>Continue implementation of operation and maintenance activities and efforts on Institutional Controls</li> </ul> <i>2006: ongoing</i>	
	Blackburn & Union Privileges site: Complete Remedial Investigation/Feasibility Study, issue proposed plan and Record of Decision for cleanup (Alternate EPA Target)	Blackburn & Union Privileges site <ul style="list-style-type: none"> <li><b>Continue oversight of Remedial Investigation/ Feasibility Study</b></li> </ul> <i>2005-2006: ongoing</i>	
	<b>Cannons (Bridgewater) site:</b> Complete five-year review of remedy with DEP input	<b>Cannons (Bridgewater) site:</b> Review and comment on five-year review and Reuse Assessment Report <i>2006: ongoing</i>	
	<b>Charles George site:</b> Complete five-year review of remedy with DEP input	<b>Charles George site:</b> Continue implementation of operations and maintenance activities <i>2005-2006: ongoing</i>  Sign state Superfund contract	

Key Strategies	2005 – 2006 Actions		MA DEP Outputs
	EPA NE	MA DEP	Milestone
		2006: <i>completed</i>	
	<b>General Electric</b> The Consent Decree created a "management architecture" which includes periodic meetings of the Regional Administrator, MADEP Commissioner, Mayor of Pittsfield, Director of the Pittsfield Economic Development Authority and GE's VP in charge of Corporate Environmental Affairs. Meetings occur about 3 times per year. EPA will work with DEP on another part of the consent decree where dozens of environmental restrictions are required to be placed on properties. DEP must be involved in the negotiation process to ensure that the final restrictions are acceptable to DEP who will be the grantor of the restrictions.		

Key Strategies	2005 – 2006 Actions		MA DEP Outputs
	EPA NE	MA DEP	Milestone
	<b>Groveland Wells site:</b> Continue operation of groundwater remedy  Evaluate additional source control options, implement recommendations of remedy optimization review with DEP input  Complete five-year review of remedy with DEP input	<b>Groveland Wells site:</b> Continue remedy oversight 2005–2006: <i>ongoing</i>	
	<b>Hatheway &amp; Patterson site:</b> Complete Remedial Investigation/Feasibility Study, issue proposed plan and Record of Decision for cleanup. Obtain DEP review and concurrency on ROD	<b>Hatheway &amp; Patterson site:</b> Review Remedial Investigation/Feasibility Study 2005: <i>completed</i>  Review and comment on proposed plan and sign ROD concurrence letter 2006: <i>completed</i>	
	<b>Haverhill Landfill site;</b> Continue coordination with DEP on PRP's drum removal and investigation activities	<b>Haverhill Landfill site:</b> Secure and remove buried drums 2005-2006: <i>ongoing</i>	
	<b>Hocomonco Pond site:</b> Work with DEP and PRP on DNAPL recovery issues	<b>Hocomonco Pond site:</b> Continue oversight of site remedy 2005–2006: <i>ongoing</i>	
	<b>Industri-Plex site:</b> Work with DEP and	<b>Industri-Plex site:</b>	

Key Strategies	2005 – 2006 Actions		MA DEP Outputs
	EPA NE	MA DEP	Milestone
	<p>PRP's to complete and implement institutional controls</p> <p>Conduct Feasibility Study (in conjunction with Wells G&amp;H site), issue proposed plan and Record of Decision for cleanup (alternate EPA target)</p>	<p>Complete review of and implement institutional controls</p> <p>Review and comment on proposed plan and sign ROD concurrence letter</p> <p><i>2005-2006: Both activities completed</i></p>	



Key Strategies	2005 – 2006 Actions		MA DEP Outputs
	EPA NE	MA DEP	Milestone
	<b>Iron Horse Park site:</b> Begin negotiations with PRPs for Remedial Design/Remedial Action	<b>Iron Horse Park site:</b> Participate in settlement negotiations and review and comment on additional cleanup work <i>2006: ongoing</i>	
	<b>New Bedford Harbor site:</b> Continue Remedial Action – dredging and disposal of dredge materials  Complete five-year review of remedy with DEP input	<b>New Bedford Harbor site:</b> Serve on the Portsfields Steering Committee to coordinate redevelopment of the port area; coordinate seafood monitoring program; continue oversight of remedial action <i>2005–2006: ongoing</i>  Review and comment on five-year review <i>2006: completed</i>	
	<b>Norwood PCB site:</b> Obtain DEP review and concurrence of an Explanation of Significant Differences, a Superfund Reuse Assessment and a five-year review  Work with DEP and landowners to complete and implement institutional controls  Finalize PRP's Operation and Maintenance Plan, complete Remedial Action	<b>Norwood PCB site:</b> Work with property owner and developers to ensure work is conducted in a manner that maintains the protectiveness of the remedy <i>2005-2006: ongoing</i>	
	<b>Nuclear Metals site:</b> Continue oversight of	<b>Nuclear Metals site:</b> <ul style="list-style-type: none"> <li>Complete the agreement with the Army and</li> </ul>	

Key Strategies	2005 – 2006 Actions		MA DEP Outputs
	EPA NE	MA DEP	Milestone
	PRP Remedial Investigation/Feasibility Study Coordinate with DEP and community on DEP-led drum removal.	implement drum removal <i>2005-2006: completed</i> <ul style="list-style-type: none"> <li>Continue oversight of Remedial Investigation/Feasibility Study</li> </ul> <i>2005-2006: ongoing</i>	

Key Strategies	2005 – 2006 Actions		MA DEP Outputs
	EPA NE	MA DEP	Milestone
	<b>Nyanza site:</b> Evaluate options to address groundwater (OU2), propose ROD Amendment, if necessary Continue Sudbury River RI/FS (OU4)	<b>Nyanza site:</b> Review and comment on proposed plan; review and comment on Remedial Investigation/ Feasibility Study <i>2006: ongoing</i>	
	<b>PSC Resources site:</b> Complete five-year review of remedy with DEP input	<b>PSC Resources site:</b> Continue oversight of Operation and Maintenance activities <i>2005-2006: ongoing</i> Review and comment on five-year review <i>2006: completed</i>	
	<b>Plymouth Harbor site:</b> Release complete Reuse Assessment, work with landowner if redevelopment proposals are received		
	<b>ReSolve site:</b> Continue oversight of PRP operation and maintenance and monitoring program	<b>ReSolve site:</b> Continue oversight of Operations and Maintenance activities <i>2005-2006: ongoing</i>	
	<b>Rose Disposal Pit site:</b> Work with DEP and PRP on institutional controls issues	<b>Rose Disposal Pit site:</b> Continue oversight of Operations and Maintenance activities <i>2005-2006: ongoing</i>	
	<b>Shpack site:</b> Begin negotiations with PRPs for Remedial Design/Remedial Action	<b>Shpack site:</b> Continue oversight of remedial action <i>2005-2006: ongoing</i>	
	<b>Silresim site:</b> Continue operation of groundwater remedy	<b>Silresim site:</b> Continue oversight of groundwater and cap remedies	

Key Strategies	2005 – 2006 Actions		MA DEP Outputs
	EPA NE	MA DEP	Milestone
	Complete consolidation of off-property soils Begin design work on site cap	2005–2006: ongoing	

Key Strategies	2005 – 2006 Actions		MA DEP Outputs
	EPA NE	MA DEP	Milestone
	<b>Sullivan's Ledge site:</b> Continue cleanup using innovative technology (UV Oxidation)	<b>Sullivan's Ledge site:</b> Continue oversight of remedial actions <i>2005-2006: ongoing</i>	
	<b>Sutton Brook Disposal Area site:</b> Continue oversight of PRP Remedial Investigation/Feasibility Study	<b>Sutton Brook Disposal Area site:</b> Continue oversight of Remedial Investigation/Feasibility Study <i>2005-2006: ongoing</i>	
	<b>Wells G&amp;H site:</b> Conduct Feasibility Study (in conjunction with Industriplex site) for Operable Unit 3, issue proposed plan and Record of Decision for cleanup (alternate EPA target)	<b>Wells G&amp;H site:</b> Continue oversight of remedial action <i>2005-2006: ongoing</i>	
	<b>W. R. Grace site:</b> Complete Remedial Investigation/Feasibility study, issue proposed plan and Record of Decision for cleanup. Obtain DEP review and concurrence on ROD	<b>W. R. Grace site:</b> Review and comment on Remedial Investigation/Feasibility Study and proposed plan; sign ROD concurrence letter <i>2006: completed</i>	
Federal Facilities	<b>Army Materials Technical Laboratory</b> Work with DEP to obtain concurrence on the Charles River Operable Unit Record of Decision	<b>Army Materials Technical Laboratory:</b> Review and concur on Charles River Operable Unit Record of Decision <i>2006: completed</i>	
	<b>Fort Devens:</b> Work to obtain DEP	<b>Fort Devens:</b>	

Key Strategies	2005 – 2006 Actions		MA DEP Outputs
	EPA NE	MA DEP	Milestone
	<p>review and concurrence of a Record of Decision</p> <p>Work with DEP to ensure that the Army completes PA/SI work at the Grant Road Housing Area</p> <p>Work with DEP to resolve groundwater and capping issues related to Shepley's Hill Landfill</p>	<p>Review and concur on the ROD for AOC 50</p> <p><i>2005: completed</i></p> <p>Work to complete PA/SI work at Grant Road</p> <p><i>2006: Did not receive pesticides reports from the Army that are needed to complete the PA/SI review</i></p>	

Key Strategies	2005 – 2006 Actions		MA DEP Outputs
	EPA NE	MA DEP	Milestone
	<b>Hanscom Air Force Base:</b> Obtain DEP review and concurrence of a Record of Decision Continue cleanup using innovative technology (Bioremediation/Oxidation)	<b>Hanscom Air Force Base:</b> Review and concur on ROD for OU 3 <i>2005: completed</i>	
		<b>Naval Weapons Industrial Reserve Plant:</b> Work with the Navy on the early Covenant Deferral Request <i>2005-2006: Preliminary discussion occurred</i>	
	<b>South Weymouth Naval Air Station:</b> Assuming negotiations get back on track during FY 06, EPA will work with DEP to secure the Governor's concurrence on the Covenant Deferral Request (CDR) package. Concurrent activities under the MA MEPA certificate on the development side include the smart growth effort that EPA supports EPA will work with DEP to ensure that the Navy restarts work that had been slowed by the	<b>South Weymouth Naval Air Station:</b> Complete agreements necessary for early transfer and privatization of cleanup activities <i>2005-2006: Worked on the CDR but the Navy and Tri-Town continue to negotiate its terms</i>	

Key Strategies	2005 – 2006 Actions		MA DEP Outputs
	EPA NE	MA DEP	Milestone
	previous negotiation effort Work to obtain DEP review and concurrence of one Record of Decision		



Key Strategies	2005 – 2006 Actions		MA DEP Outputs
	EPA NE	MA DEP	Milestone
		Develop and submit Defense/State Memorandum of Agreement for new funding for oversight activities <i>2005-2006: completed</i>	
<b>Multi-Site Cooperative Agreement</b>	Work with DEP through Superfund Pre-Remedial Cooperative Agreement (V98116401)	Make recommendations regarding Eligible Response Site Status for sites on CERCLIS	<i>2005: ongoing</i> <i>2006: completed</i>
		Evaluate sites for listing on CERCLIS	<i>2005: 4 completed</i>
		Evaluate sites for recommendation to NPL	<i>2005: 1 completed</i> <i>2006: 2 completed</i>
		Evaluate sites on CERCLIS for federal vs. state lead, and for removal from CERCLIS	<i>2005: 8 completed</i> <i>2006: 4 completed</i>
		Review PA/SI reports	<i>2006: 5 completed</i>
		Perform site visits to CERCLIS sites	<i>2006: 11 completed</i>
<b>Massachusetts Military Reservation: Perchlorate in Groundwater</b>	EPA continues with remedy selections and design/construction on the Superfund ground water plumes. One of the main issues on the Impact Area is the perchlorate level to be used to guide the investigation and cleanup.  EPA supports MA DEP efforts at promulgating a perchlorate standard.	Conduct the following work in connection with the investigation and remediation being conducted at the MMR by the Army and managed by the Army Environmental Center (AEC)  Establish Perchlorate MCL for drinking water  Review and update Massachusetts perchlorate cleanup standards as needed if EPA standards are established 2006-08 <i>2006: ongoing</i>  Develop regulatory guidance, standards, and policies relating to management of perchlorate <i>2006: completed</i>  Review and provide comments and recommendations on documents or data submitted to DEP <i>2006: completed</i>	<i>2006: MCP amendments included an MCL for perchlorate</i>

Key Strategies	2005 – 2006 Actions		MA DEP Outputs
	EPA NE	MA DEP	Milestone
		<p>Identify, evaluate, and explain MCP requirements related to response actions</p> <p><i>2005-2006: ongoing</i></p> <p>Execute site visits and participate in activities subject to public involvement requirements, including participation in Impact Area Review</p> <p>Team (i.e., IART)</p> <p><i>2005-2006: ongoing</i></p>	
<p><b>Massachusetts Military Reservation:</b></p> <p><b>Impact Area Groundwater Study (IAGS)</b></p>	<p>EPA continues with investigations, remedy selections and design/construction on the Impact Area ground water plumes and source areas.</p> <p>Work with DEP to obtain concurrence on the Demo 1 groundwater cleanup decision</p>	<p>Conduct work in connection with the investigation and remediation being conducted at MMR by the Army and managed by AEC</p> <p>Develop regulatory guidance, standards, and policies relating to management of Impact Area-related hazardous materials (e.g., HMX, RDX) that do not currently have state or federal drinking water or cleanup standards</p> <p>Execute technical reviews and provide comments and recommendations on documents or data submitted to DEP</p> <p>Identify, evaluate, and explain MCP requirements related to response actions</p> <p>Execute site visits and participate in activities subject to public involvement requirements, including participation in the IART</p> <p>Prepare and administer related agreements including reimbursement of costs associated with obtaining and analyzing split samples</p> <p>Review and inspect operations and maintenance of remedial response systems</p> <p>Attend staff meetings in support of the IAGS program</p> <p><i>2005-2006: All action ongoing</i></p>	<p><i>2005-2006: Draft regulation including these contaminants was released for public comment in the fall of 2004. Promulgation of final regulations for these contaminants was delayed</i></p>
<p><b>Massachusetts Military Reservation:</b></p> <p><b>Installation</b></p>	<p>Continue cleanup using innovative technology (Recirculation wells)</p>	<p>Provide regulatory oversight in close coordination with EPA (state serves as a concurring agency) in support of the MMR Installation Restoration Program (IRP) managed by the Air Force Center for</p>	<p><i>2005-2006: Provided optimization strategies for ongoing plume cleanup</i></p>

Key Strategies	2005 – 2006 Actions		MA DEP Outputs
	EPA NE	MA DEP	Milestone
<b>Restoration Program</b>		Environmental Excellence 2005-2006: ongoing	
<b>Leaking Underground Storage Tanks (LUST)</b>		<p>Complete Winton's Food &amp; Fuel (Palmer) Pay-for-Performance remedial project 2005-2006: ongoing</p> <p>Implement LUST Cooperative Agreement Work Plan 2005: completed</p>	<p>2006: Continued working with the town of Charlton to provide funding assistance for design of a municipal waterline extension to provide drinking water to several homes whose private wells were contaminated by MTBE as a result of LUST</p> <p>2006: Continued working with the town of Ashburnham to provide funding assistance for construction of alternate water supply to homes whose private wells were impacted by MTBE as a result of LUST</p> <p>2006: Continued work on LUST site tracking data base</p> <p>2006: 204 LUST cleanups completed using EPA criteria</p>
<b>Participate with the Association of State and Territorial Solid Waste Management Officials (ASTSWMO)</b>		<p>Serve as chair of the State/EPA Superfund Task Force Working with EPA and states on issues related to Superfund</p> <p>Serve as chair of the Sediments Task Force working with EPA and states on issues related to evaluating and remediating contaminated sediments</p> <p>Serve on the State Response and Brownfields Programs Operations Task Force working with EPA and the states on issues related primarily to Brownfields programs and implementing the new Brownfields Law</p> <p>Serve on the Long Term Stewardship Focus Group tasked with improving partnership between state and federal agencies and producing issue papers to promote state interests on issues affecting environmental restoration at federal facilities</p> <p>Serve on the Federal Facilities DSMOA Task Force working with DoD and the states on issues related to federal facilities</p> <p>Serve as chair of the Policy and Technology Focus Group working with DOD, EPA, and states on issues affecting environmental restoration at federal</p>	

Key Strategies	2005 – 2006 Actions		MA DEP Outputs
	EPA NE	MA DEP	Milestone
		<p>facilities and promoting coordination among other training/technical groups</p> <p>Serve on the Federal Facilities subcommittee as the Policy and Technology Focus Group representative</p> <p>Serve as the EPA Region 1 Community Involvement Focus Group representative working with EPA and states on issues aimed at improving communications and public process</p> <p><i>2005-2006: All actions ongoing</i></p>	
<b>Participate with the New England Waste Management Officials Association (NEWMOA)</b>		<p>Continue to work with EPA and the other New England states on issues common to the region, including brownfields, institutional controls, and improving the quality of site characterization</p> <p><i>2005-2006: ongoing</i></p>	
<p><b>Assist in Enhancing Homeland Security</b></p> <p>Participate in Planning, Preparedness and Response with Other State and Federal Agencies</p>		<p>Interface and coordinate planning and preparedness on Homeland Security matters with the US EPA, the Region I Regional Response Team (RRT), the US Department of Homeland Security, the Massachusetts National Guard Civilian Support Team (CST), the US Coast Guard (Providence and Boston), MEMA, the Massachusetts Department of Fire Services and its District Hazardous Material Response Teams, and other appropriate federal, military, state, and local authorities</p> <p>Provide field and technical support during Homeland Security incidents focusing on identifying and protecting environmental receptors and managing decontamination and other waste materials</p> <p><i>2005-2006: All actions ongoing</i></p>	<p><i>2006: Participated in two RRT meetings (April 2006 and September 2006); co-chaired one Boston Area Committee Meeting with USCG (September 2006)</i></p> <p><i>2006: Developed Mass Decontamination Unit cards to deal with decontamination water at 11 acute care facilities</i></p>
<p><b>Facilitate Restoration and Redevelopment of Brownfields Properties</b></p> <p>Coordinate,</p>	<p>Provide new grants to:</p> <p>Attleboro Berkshire Regional Planning Commission</p>	<p>Promote and assist in the use of the Special Project Designation (SPD), a tool that provides increased flexibility on cleanup deadlines for certain types of projects</p> <p>Work with EOEa to implement the Environmental Justice Policy</p>	<p><i>2006: Expanded SPD regulations to include: private developers with municipal sponsorship, and extensions to MCP phase work</i></p> <ul style="list-style-type: none"> <li>• Conduct state-funded investigations/risk reduction activities at EOEa-designated</li> </ul>

Key Strategies	2005 – 2006 Actions		MA DEP Outputs
	EPA NE	MA DEP	Milestone
facilitate, provide technical assistance and on-site coordination for Brownfields Redevelopment	<p>Boston Franklin Regional Council of Governments</p> <p>Montachusett Regional Planning Commission</p> <p>Norfolk County Pioneer Valley Regional Planning Commission</p> <p>Boston Redevelopment Authority</p> <p>Brockton</p> <p>Greenfield</p> <p>Marlborough</p> <p>Mystic valley Development Commission</p> <p>New Bedford</p>	<ul style="list-style-type: none"> <li>• Hold quarterly meetings with regional coordinators</li> <li>• Generate monthly reports for the Commissioner</li> <li>• Provide technical outreach to project proponents on regulatory issues, and promote the use of financial and liability incentives</li> <li>• Lead monthly partner meetings with state and federal staff monthly</li> <li>• Continue to track DEP brownfields involvement using time codes and other tools</li> <li>• Provide letters of support to entities applying for EPA brownfields grant funding</li> <li>• Work with state partners toward developing an inventory of brownfields sites</li> <li>• Provide assistance to communities receiving cleanup grant funding through the EPA Cleanup Grant Program</li> <li>• Continue to provide assistance to communities that have received funding through the Brownfields Cleanup Revolving Loan Fund Program</li> <li>• Provide support to the Office of Commonwealth Development and the Executive Office of Environmental Affairs on Brownfields Policy development and Transit-Oriented Development (TOD) discussions</li> </ul>	<p>municipally owned sites</p> <p><i>2005: Completed one PCB Phase II/risk assessment at the Fall River/City Pier, Davol Street project</i></p> <ul style="list-style-type: none"> <li>• Assist Deputy Commissioner in planning/implementing the Brownfields Roundtable</li> </ul> <p><i>2005: Offered staff assistance but project not implemented</i></p> <p><i>2005-2006: Participated in planning and strategy meetings to help sponsor the Brownfields2006 National Conference held in November 2006. Personnel and fiscal resources focused on working with contractors to prepare a 30 minute film featuring successfully redeveloped brownfields sites and create informational brochures for distribution at the conference.</i></p>

Key Strategies	2005 – 2006 Actions		MA DEP Outputs
	EPA NE	MA DEP	Milestone
		<p>Promote the redevelopment of priority lien sites</p> <p>Conduct pre-permit meetings in regions for brownfields project proponents as needed</p> <p>Organize and speak at public outreach forums <i>2005-2006: All actions ongoing</i></p> <p>Target proactive outreach to municipalities</p> <p>Assist the AGO in reviewing Covenant Not to Sue applications</p> <p>Implement brownfields site assessments/ cleanups</p> <p>Work with state partners toward developing an inventory of brownfields sites</p>	<p><i>2005-2006: 40 completed</i></p> <p><i>2005-2006: 38 completed</i></p> <p><i>2005-2006: 9 assessments/ cleanups completed</i></p> <p><i>2006: Developed inventory of 100 sites using information from outside entities</i> <i>2005-2006: Maintained separate inventory of technical assistance sites (100 sites as of 2006)</i></p>
Implement Brownfields Cooperative Agreement	<ul style="list-style-type: none"> <li>Provide DEP with \$1,368,049 in funding from the Brownfields Program through a Brownfields State Response Program Cooperative Agreement issued under the new Brownfields law, (CERCLA, Section 128(a)).</li> </ul> <p>Using this funding, MA DEP will:</p> <ul style="list-style-type: none"> <li>Develop program</li> </ul>	<p>Enhance the state's oversight and enforcement capabilities by implementing the eGov Project, implementing procedures to prioritize auditing and enforcement; reviewing LSP performance records, reviewing site audits, implement plans to address the "Non-responders"</p> <p>Enhance public record of sites, as necessary, to ensure it meets requirements for continued funding</p> <p>Perform Site Manager role for municipalities that need assistance implementing Brownfields Revolving Fund Loan and Brownfields Cleanup Grant projects</p> <p><i>2005-2006: ongoing</i></p>	

Key Strategies	2005 – 2006 Actions		MA DEP Outputs
	EPA NE	MA DEP	Milestone
	guidance to address: asbestos in soil, monitored natural attenuation, risk assessment short forms for contamination.		

Key Strategies	2005 – 2006 Actions		MA DEP Outputs
	EPA NE	MA DEP	Milestone
Superfund Pre-remedial	<p>Work with DEP through Superfund Pre-Remedial Cooperative Agreement (V98116401) that also includes Brownfield Site Assessment activities (the BSA portion of this cooperative agreement is a continuation of the activities funded under Superfund - prior to the new Brownfields authorization)</p> <p>Assist DEP in reviewing Eligible Response Site List and providing feedback on EPA's proposed sites to be excluded from the enforcement bar provision in the new Brownfields legislation</p>		
Oversee Cleanups at RCRA Corrective Action Sites	<p>Work with DEP in meeting the Environmental Indicators (EI) at the remaining Government Performance Results Act (GPRA) sites and in developing a schedule for</p>	<p><b>Program Development and Evaluation</b></p> <ul style="list-style-type: none"> <li>Regulation, Policy and Guidance Development for Hazardous Waste (non Beyond ERP): Federally Corrective Action authorization work Ongoing</li> </ul> <p><b>Permitting</b></p> <ul style="list-style-type: none"> <li>Perform closure activities at hazardous waste facilities as required and evaluate Resource</li> </ul>	<p>Final regulations, Attorney General Statement and Memorandum of Understanding submitted to EPA by 3/30/07 <i><b>Draft Regulation and program description sent to EPA</b></i></p> <ul style="list-style-type: none"> <li>Meet the Human Exposure EI's and complete the human exposure checklists for all remaining 2005 GPRA Baseline sites by September 30, 2005</li> </ul>



Key Strategies	2005 – 2006 Actions		MA DEP Outputs
	EPA NE	MA DEP	Milestone
	<p>achieving Remedy Decisions and Construction Completions at all sites subject to RCRA Corrective Action</p> <ul style="list-style-type: none"> <li>• Work with DEP in making Remedy Decisions and Construction Completions at sites subject to RCRA Corrective Action</li> <li>• Work with DEP in updating the RCRA database for Corrective Action activities</li> <li>• Conduct RCRA corrective action at several EPA lead sites in order to meet the EI's (Zeneca, Englehard, Clean Harbors Braintree, Columbia Mfg.).</li> </ul>	<p>Conservation and Recovery Act Environmental Indicators</p> <p>RCRA Corrective Action</p> <p>As a one-time commitment, DEP has agreed to the following site-specific goals in the 2004-2006 PPA in order that EPA Region I can make required commitments to meet its GPRA goals. This is a level of specificity that DEP does not believe should be incorporated into the PPA. It must also be noted that these are site-specific goals. There is some uncertainty about what will be found at these sites as clean-up activities proceed. Completion dates might need to be revisited if site conditions mean the timelines must be extended.</p> <ul style="list-style-type: none"> <li>• Complete the human exposure EI checklists for the state lead 2005 GPRA sites</li> <li>• Complete all activities necessary to meet the Human Exposure indicator at the Wyman Gordon site by 9/30/05</li> <li>• Review Bostik site files and complete all activities necessary to meet the Human Exposure indicator by 9/30/05</li> <li>• Work with EPA to complete the EI checklists at the Leavens Awards and Walton &amp; Lonsbury sites by 9/30/05</li> <li>• Coordinate with EPA in making remedy decisions and remedy construction completions for sites on the new 2008 GPRA Baseline</li> </ul> <p><b>Ongoing</b></p> <ul style="list-style-type: none"> <li>• Provide assistance to EPA in updating the RCRA database for Corrective Action activities and in obtaining documents at sites subject to RCRA Corrective Action from Licensed Site Professionals. <b>Ongoing</b></li> </ul>	<p>(this excludes the GE Pittsfield site)</p> <p><b>Done</b></p> <ul style="list-style-type: none"> <li>• Achieve Human Exposures Controlled Under Current Conditions at two (2) facilities or more, as necessary, to achieve cumulative total of 85% <b>(met)</b></li> <li>• Achieve Contaminated Ground Water Migration Under Control at two (2) facilities or more, as necessary, to achieve cumulative total of 75% <b>at 70%</b></li> <li>• Achieve site wide Remedy Selection at two (2) facilities or more, as necessary, to achieve cumulative total of 20% <b>at 0%</b></li> <li>• Achieve Construction Complete at one (1) facility or more, as necessary, to achieve cumulative total of 15% <b>at 0%</b></li> </ul>

Key Strategies	2005 – 2006 Actions		MA DEP Outputs
	EPA NE	MA DEP	Milestone
Program Development and Support		<p>Compliance and Enforcement</p> <ul style="list-style-type: none"> <li>Implement municipal stewardship grant &amp; measurement program - extended 6 month for recognition program and develop plan to transition program <b>Done</b></li> </ul> <p>Data Systems Development</p> <ul style="list-style-type: none"> <li>Systems Development: CDX Network readiness grant - RCRA &amp; Air Quality database work - redesign, EPICS integration, testing, data transfer protocols to EPA</li> <li>Systems Development: Single Actor Model (SAM) - EPICS Integration work w/ITO</li> <li>Systems Development: EDEP Support – Building forms, outreach to regulated community and technical support of eDEP application for all BWP forms</li> <li>Systems Development: C&amp;E Enhancement Systems work – MADOG, Citation Library, EPICS data model Changes</li> <li>Participate in Quality Management Planning work group</li> </ul> <p>Fees</p> <ul style="list-style-type: none"> <li>Issue Toxics Use Reduction Bills for 2004 <b>Done</b></li> <li>Data support to Annual Compliance Fee (ACF) program - cleanup/extract for bills <b>Done</b></li> </ul> <p>Program Development and Evaluation</p> <ul style="list-style-type: none"> <li>Work on NEWMOA and ASTSWMO projects to facilitate interstate waste management coordination <b>Ongoing</b></li> <li>Implement Measures of Success Project <b>Done</b></li> </ul> <p>Program Planning and PPA</p> <ul style="list-style-type: none"> <li>EPA grant commitment negotiations <b>Ongoing</b></li> </ul> <p>Public Information</p> <ul style="list-style-type: none"> <li>Track and coordinate response to Freedom of</li> </ul>	

Key Strategies	2005 – 2006 Actions		MA DEP Outputs
	EPA NE	MA DEP	Milestone
		Information Requests <b>Ongoing</b> Inter/intranet management, including Public Access Project Ongoing	

BWP FFY 06 PLANNED AND ACTUAL COMPLIANCE ACTIVITIES

	PLANNED							ACTUAL
	Multi Media	Single Media	Proto col C	Pres ence	Assessment	Total Inspections/Site Visits	Reports Reviewed	Total Actual
<b>AIR INSPECTIONS</b>								
Air Operating Permit	28	23	0	8	0	59		143
ERP Dry Cleaner Major Equivalent	20					20		20
RESm80 Minors	44	4	0	0	0	48		68
Air Permit Related (Non air operating permit source)	0	0	0	72	0	72		70
Stack Test Observations	0	46	0	60	0	106		132
Suspicious Report: Air Source	0	12	0	2	0	14		3
Air Source Registration Non filers	0	0	0	0	50	50		50
Suspicious Report Review: Stage II	0	4	0	35	0	39		25
Suspicious Report Review: ERP	0	4	0	15	0	19		27
Anti Idling	8	0	0	0	0	8		38
Non Major Air Baseline Compliance Rates	0	52	0	0	0	52		48
Train Anti Idling	0	8	0	0	0	8		0
SERO: Fiberglass Reinforced Mfg.	5	0	0	0	0	5		4

<b>Total Estimated Air Inspections</b> (Actual reflects total number of site visits/inspections that assessed compliance with air regulations)	105	0	153	0	192	50	500		633
<b>ASBESTOS INSPECTIONS</b>			532				532		680
<b>HAZARDOUS WASTE INSPECTIONS</b>									
Commercial Offsite Recyclers	23		0	0	0	0	23		17
Large Quantity Hazardous Waste Generators that had no HW violations in previous inspection (once every 8 years)	18		3	0	0	0	21		
Large Quantity Hazardous Waste Generators never inspected	19		2	0	0	0	21		
New Large Quantity Generators (inspect within 3 years of start up)	6		0	0	0	0	6		
Large Quantity hazardous Waste Generators with minor violations on past inspection (reinspect five years after violation discovered)	10		0	0	0	0	10		
Large Quantity Hazardous Waste Generators with significant violations at their last inspection (inspect 2 years after violation discovered)	7		0	0	0	0	7		
ALL LQG							65		138
Large Quantity Generators: Acting out of Status	45		5	0	20	0	70		49

Large Quantity Generators: ERP Dry Cleaner Equivalent	20		0	0	0	0	<b>20</b>		20
Transfer Storage and Disposal Facilities	12		0	0	0	0	<b>12</b>		12
Hazardous Waste Transporter Audits	0		4	0	0	0	<b>4</b>		7
SQG Baseline Compliance Rates (postponed initiative until 2007)	0		60	0	0	0	<b>60</b>		0
Junkyards	8		0	0	0	0	<b>8</b>		46
NERO: Tank Removal Companies	15		0	0	0	0	<b>15</b>		6
SERO: Auto Dealers	0		10	0	0	0	<b>10</b>		13
<b>Total Estimated Hazardous Waste Inspections</b> (Actual reflects total number of site visits /inspections that assessed compliance with HW requirements)	183	0	84	0	20	0	<b>287</b>		<b>634</b>
<b>SOLID WASTE INSPECTIONS</b>	0	0	515	0	0	0	<b>515</b>		<b>724</b>
<b>INDUSTRIAL WASTE WATER</b>									
IWW NPDES Majors, NPDES Minors, groundwater dischargers in drinking water protection and Listed Basins	21		13	0	9	0	<b>44</b>		<b>284</b>
Indirect Dischargers Identified as problems by IPP POTWs	0		0	0	0	0	<b>0</b>		
Significant Industrial Users in NON IPP POTWS	0		0	0	0	0	<b>0</b>		
IWW Permit Related (SM for all that are up for renewal)	0		5	0	0	0	<b>5</b>		<b>5</b>

Report Review Results:IWW Sources	0		9	0	0	0	9		9
WERO: 2. Adopt-a-Town/unsewered areas	15		0	41	0	0	56		33
WERO: 4. Rug Cleaners/Power Washers	0		4	0	0	0	4		4
<b>Total Estimated IWW Inspections</b> (Actual reflects total number of inspections/site visits that assessed compliance with IWW requirements)	36	0	31	41	9	0	118		289
<b>OTHER TARGETS</b> (Actual includes misc targeted groups)									11
Report Review Results: TURA	3		3	0	0	0	6		1
HIGH RISK	10		3	0	2	0	15		19
UNIDENTIFIED (including complaints)	47		40	5	35	10	137		232
Poorly Performing Corporations (decided not to do initiative)	8		0	0	0	0	8		
Strip Mall Sweeps (decided not to do initiative)	0		4	0	10	0	14		
CERO: 2015 Blackstone/Old Mills/New Businesses	5		5	5	10	20	45		45
NERO: NONs issued in the past 2 years (decided not to do initiative)	20		0	0	0	0	20		
NERO: Clean States	0		0	0	5	0	5		5
WERO: 3. Rail yards/Railways (decided not to do initiative)	3		0	0	0	0	3		
WERO: 5. Out of System	10		0	0	0	0	10		23
<b>Total Other Targets</b>	106	0	55	10	62	30	263		336

<b>TOTAL INSPECTIONS</b> (Massachusetts does multi media inspections, therefore one inspection may include inspections of several media. Actual #'s reflect the total individual site visits/inspections conducted, regardless of the number of media inspections performed during the visit. The "planned #'s" may include some double counting of individual media inspections during a single site visit (e.g. an air operating inspection may include an industrial waste water inspection and also a sqg inspection).								
	410	0	1438	51	191	80	2170	1938
<b>REPORT REVIEWS</b>								
<b>Facility Operating Reports</b>								
Air Operating Permit Sources							413	976
Non Major Air Source Reports							837	566
Hazardous Waste Reports							111	93
TSDF Financial Responsibility							26	28
Industrial Wastewater Reports							1364	701
Solid Waste Facility Financial Responsibility							80	80
Solid Waste Facility Operating Reports							100	893
<b>Annual / Biennial Summary Reports</b>								
TURA							770	633
ERP Printers							1000	556



ERP Dry Cleaners	500	479
ERP Photoprocessors	400	439
ERP Boilers	20	0
ERP Holding Tanks	10	0
Stage II	3000	3017
Ride Share	200	202
Asbestos Notifications	18500	16152
Hazardous Waste Manifests	400000	400000
Air Source Registrations	1620	599
Hazardous Waste Recycling Facilities	300	304
Hazardous Waste Transporter Electronic Monthly Operating Reports	1440	1440
Hazardous Waste LQG Biennial Reports	500	486
Solid Waste Facility Reports	100	250
Groundwater Monitoring	10	13
<b>TOTAL REPORT REVIEW</b>	<b>431009</b>	<b>427907</b>

***BRP Compliance Inspections by  
Type***

<b>BRP Region / Program</b>	<b>MISC estimate</b>	<b>San Surv &amp; CCEs (EPA*)</b>	<b>UIC est. **</b>	<b>NPDES Major (EPA*)</b>	<b>NPDES Minor (EPA*)</b>	<b>MISC WPC estimate</b>	<b>Ground water ***</b>	<b>Lg Sys Title 5 estimate</b>	<b>Wetlands estimate</b>	<b>Ch. 91 estimate</b>	<b>WMA reviews as agreed</b>	<b>Other Inspect discretionary</b>
<b>Actual FFY 06 DW</b>	<b>422</b>	<b>283</b>	<b>7</b>	<b>67</b>	<b>16</b>	<b>221</b>	<b>131</b>	<b>69</b>	<b>1073</b>	<b>58</b>	<b>60</b>	<b>20</b>

***The "OTHER" category builds in regional discretion. As discretionary inspections and re-inspections get conducted, they are logged as their actual inspection type. For this reason, the actual inspections logged in some categories exceed the original planned total, and the "Other" category diminishes. "Other" also includes WMA site inspections.***

***\* PPA and work plan commitments. These inspections must be completed on time to fulfill DEP obligations. NPDES includes year 2 basins, facilities under current orders, and facilities targeted for nitrogen loading or Assabet TMDL monitoring studies.***

***\*\* UIC inspections are also performed by BWP IWW staff in the regions. UIC inspections performed by IWW staff get logged as BWP, not BRP, inspections.***

***\*\*\* Work plan commitment to inspect year 2 basins and priority basins, and all GW under orders.***